

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 1 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In the Cover Sheet:

At Section 54, column 1, please delete "Disease, Secretase" and insert --Disease Secretase--.

At Section (*), column 1, please insert --This patent is subject to a terminal disclaimer--.

On page 2, column 1, line 5, please delete "th" and insert --the--.

In the Specification:

At Column 1, line 1, please delete "Disease, Secretase" and insert --Disease Secretase--.

At Column 2, line 3, please delete "a-site" and insert -- α site--.

At Column 3, line 56, please insert --of-- before "those".

At Column 4, line 24, please delete "lease" and insert --least--.

At Column 5, line 10, please insert --to-- before "any".

At Column 5, line 49, please insert --of-- before "those".

At Column 6, line 28, please delete "lease" and insert --least--.

At Column 8, line 6, please insert --iii) select the cells which produce the critical peptide-- after "APP,".

At Column 8, line 16, please insert --(SEQ ID NO: 74)-- after "P2".

At Column 8, line 37, please delete "has" and insert --as--.

At Column 8, line 64, please delete "Measurment" and insert --Measurement--.

At Column 9, line 3, please delete "reporter-protein" and insert --reporter protein--.

At Column 9, line 38, please delete "construct" and insert --constructed--.

At Column 9, line 40, please delete "strechess" and insert --stretches--.

At Column 9, line 51, please delete "recombinant" and insert --recombinant--.

At Column 10, line 12, please delete "hyrdrophobic" and insert --hydrophobic--.

At Column 11, line 37, please delete "oassays" and insert --bioassays--.

At Column 11, line 53, please delete "on" and insert --one--.

At Column 16, line 11, please delete "Fig. 11" and insert --Fig. 12--.

At Column 16, line 48, please delete "I)" and insert --ID--.

At Column 16, line 65, please delete "Glutarnine" and insert --Glutamine--.

At Column 17, line 37, please delete " α -secretase" and insert -- β -secretase--.

At Column 18, line 38, please delete "possible" and insert --possibly--.

At Column 21, line 12, please delete "6" and insert --6,--.

At Column 25, line 12, please delete "embyonic" and --embryonic--.

At column 30, line 28, please delete "Hu-ASPI" and insert --Hu-aspl--.

At column 31, line 20, please delete "sequence" and insert --sequenced--.

At column 32, line 42, please insert --to-- before "contain".

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It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In the Specification, (cont'd):

At column 33, line 8, please delete "manufacture" and insert --manufacturer--.

At column 33, line 60, please delete "Phospholmager" and insert
--PhosphorImager--.

At column 33, line 63, please delete "is" and insert --in--.

At column 33, line 66, please delete "CDNA" and insert --cDNA--.

At column 35, line 59, please delete "AP" and insert --A β --.

At column 36, line 63, please delete "proprietary" and insert --proprietary--.

At column 39, line 17, please delete "AP" and insert --A β --.

At column 39, line 18, please delete "AP" and insert --A β --.

At column 39, line 24, please delete "AP" and insert --A β --.

At column 39, line 26, please delete "P42" and insert -- β 42--.

At column 39, line 26, please delete "y-secretase" and insert -- γ -secretase--.

At column 40, line 51, please delete "Ab" and insert --A β --.

At column 40, line 67, please delete " β P40" and insert --A β 40--.

At column 40, line 67, please delete " β P42" and insert --A β 42--.

At column 41, line 5, please delete " β P42" and insert --A β 42--.

At column 41, line 17, please delete "Ab." and insert --A β --.

At column 44, line 50, please delete "internediate" and insert --intermediate--.

At column 45, line 37, please delete "2O" and insert --20--.

At column 45, line 43, please delete "101 M" and insert --101 μ M--.

At column 45, line 65, please delete "Hu-ASp2(b)" and insert --Hu-Asp2(b)--.

At column 46, line 65, please delete "prepared" and insert --prepare--.

At column 48, line 1, please delete "(1/250)" and insert --(1/2500)--.

At column 48, line 11, please delete "KI" and insert --K1--.

At column 49, line 16, please delete "Swedigh" and insert --Swedish--.

In the Sequence Listing:

Please delete the sequence listing as published and replace with the paper copy attached hereto.

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It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In the Claims:

In claim 1, at column 163, lines 43-44, please delete "FIG. 3 (SEQ ID NO: 4)," and insert --FIG. 4, (SEQ ID NO: 3)--.

In claim 1, at column 163, lines 51-54, please delete ", and wherein the polypeptide exhibits aspartyl protease activity involved in processing APP into amyloid beta." and insert --.--.

In claim 6, at column 164, line 45, please delete "A host" and insert --An isolated host--.

In claim 8, at column 164, line 50, please delete "derived from" and insert -- that is--.

In claim 10, at column 164, line 56, please delete "A host" and insert --An isolated host--.

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It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

SEQUENCE LISTING

<110> Gurney et al.

<120> ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES THEREFOR

<130> 28341/6280M

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65 70 75 80
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Leu Ile Gly Thr Pro Pro Gln Lys Leu Gln Ile Leu Val Asp Thr Gly
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      325                330                335
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35 40 45

Glu Glu Pro Glu Glu Pro Gly Arg Arg Gly Ser Phe Val Glu Met Val
50 55 60

Asp Asn Leu Arg Gly Lys Ser Gly Gln Gly Tyr Tyr Val Glu Met Thr
65 70 75 80

Val Gly Ser Pro Pro Gln Thr Leu Asn Ile Leu Val Asp Thr Gly Ser
85 90 95

Ser Asn Phe Ala Val Gly Ala Ala Pro His Pro Phe Leu His Arg Tyr
100 105 110

Tyr Gln Arg Gln Leu Ser Ser Thr Tyr Arg Asp Leu Arg Lys Gly Val
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<212> PRT
<213> Homo sapiens

<400> 6

Met Ala Gln Ala Leu Pro Trp Leu Leu Trp Met Gly Ala Gly Val
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Leu Pro Ala His Gly Thr Gln His Gly Ile Arg Leu Pro Leu Arg Ser

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
 APPLICATION NO. : 09/869414
 DATED : September 14, 2004
 INVENTOR(S) : Mark E. Gurney et al.

Page 11 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

20	25	30
Gly Leu Gly Gly Ala Pro Leu Gly Leu Arg Leu Pro Arg Glu Thr Asp 35 40 45		
Glu Glu Pro Glu Glu Pro Gly Arg Arg Gly Ser Phe Val Glu Met Val 50 55 60		
Asp Asn Leu Arg Gly Lys Ser Gly Gln Gly Tyr Tyr Val Glu Met Thr 65 70 75 80		
Val Gly Ser Pro Pro Gln Thr Leu Asn Ile Leu Val Asp Thr Gly Ser 85 90 95		
Ser Asn Phe Ala Val Gly Ala Ala Pro His Pro Phe Leu His Arg Tyr 100 105 110		
Tyr Gln Arg Gln Leu Ser Ser Thr Tyr Arg Asp Leu Arg Lys Gly Val 115 120 125		
Tyr Val Pro Tyr Thr Gln Gly Lys Trp Glu Gly Glu Leu Gly Thr Asp 130 135 140		
Leu Val Ser Ile Pro His Gly Pro Asn Val Thr Val Arg Ala Asn Ile 145 150 155 160		
Ala Ala Ile Thr Glu Ser Asp Lys Phe Phe Ile Asn Gly Ser Asn Trp 165 170 175		
Glu Gly Ile Leu Gly Leu Ala Tyr Ala Glu Ile Ala Arg Leu Cys Gly 180 185 190		
Ala Gly Phe Pro Leu Asn Gln Ser Glu Val Leu Ala Ser Val Gly Gly 195 200 205		
Ser Met Ile Ile Gly Gly Ile Asp His Ser Leu Tyr Thr Gly Ser Leu 210 215 220		
Trp Tyr Thr Pro Ile Arg Arg Glu Trp Tyr Tyr Glu Val Ile Ile Val 225 230 235 240		
Arg Val Glu Ile Asn Gly Gln Asp Leu Lys Met Asp Cys Lys Glu Tyr 245 250 255		
Asn Tyr Asp Lys Ser Ile Val Asp Ser Gly Thr Thr Asn Leu Arg Leu 260 265 270		
Pro Lys Lys Val Phe Glu Ala Ala Val Lys Ser Ile Lys Ala Ala Ser 275 280 285		
Ser Thr Glu Lys Phe Pro Asp Gly Phe Trp Leu Gly Glu Gln Leu Val 290 295 300		
Cys Trp Gln Ala Gly Thr Thr Pro Trp Asn Ile Phe Pro Val Ile Ser 305 310 315 320		
Leu Tyr Leu Met Gly Glu Val Thr Asn Gln Ser Phe Arg Ile Thr Ile 325 330 335		
Leu Pro Gln Gln Tyr Leu Arg Pro Val Glu Asp Val Ala Thr Ser Gln 340 345 350		

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 12 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Asp Asp Cys Tyr Lys Phe Ala Ile Ser Gln Ser Ser Thr Gly Thr Val
355 360 365

Met Gly Ala Val Ile Met Glu Gly Phe Tyr Val Val Phe Asp Arg Ala
370 375 380

Arg Lys Arg Ile Gly Phe Ala Val Ser Ala Cys His Val His Asp Glu
385 390 395 400

Phe Arg Thr Ala Ala Val Glu Gly Pro Phe Val Thr Leu Asp Met Glu
405 410 415

Asp Cys Gly Tyr Asn Ile Pro Gln Thr Asp Glu Ser Thr Leu Met Thr
420 425 430

Ile Ala Tyr Val Met Ala Ala Ile Cys Ala Leu Phe Met Leu Pro Leu
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Cys Leu Met Val Cys Gln Trp Arg Cys Leu Arg Cys Leu Arg Gln Gln
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<212> DNA
<213> Mus musculus

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UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 13 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

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Gly Leu Ala Gly Pro Pro Leu Gly Leu Arg Leu Pro Arg Glu Thr Asp
      35           40           45

Glu Glu Ser Glu Glu Pro Gly Arg Arg Gly Ser Phe Val Glu Met Val
      50           55           60

Asp Asn Leu Arg Gly Lys Ser Gly Gln Gly Tyr Tyr Val Glu Met Thr
      65           70           75           80

Val Gly Ser Pro Pro Gln Thr Leu Asn Ile Leu Val Asp Thr Gly Ser
      85           90           95

Ser Asn Phe Ala Val Gly Ala Ala Pro His Pro Phe Leu His Arg Tyr
      100          105          110

Tyr Gln Arg Gln Leu Ser Ser Thr Tyr Arg Asp Leu Arg Lys Gly Val
      115          120          125

Tyr Val Pro Tyr Thr Gln Gly Lys Trp Glu Gly Glu Leu Gly Thr Asp
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Leu Val Ser Ile Pro His Gly Pro Asn Val Thr Val Arg Ala Asn Ile
      145          150          155          160

Ala Ala Ile Thr Glu Ser Asp Lys Phe Phe Ile Asn Gly Ser Asn Trp
      165          170          175

Glu Gly Ile Leu Gly Leu Ala Tyr Ala Glu Ile Ala Arg Pro Asp Asp
      180          185          190

Ser Leu Glu Pro Phe Phe Asp Ser Leu Val Lys Gln Thr His Ile Pro
      195          200          205

Asn Ile Phe Ser Leu Gln Leu Cys Gly Ala Gly Phe Pro Leu Asn Gln
      210          215          220

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      260          265          270

Asp Leu Lys Met Asp Cys Lys Glu Tyr Asn Tyr Asp Lys Ser Ile Val
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UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 14 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

275	280	285
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Ala Val Lys Ser Ile Lys Ala Ala Ser Ser Thr Glu Lys Phe Pro Asp 305 310 315 320		
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Thr Asn Gln Ser Phe Arg Ile Thr Ile Leu Pro Gln Gln Tyr Leu Arg 355 360 365		
Pro Val Glu Asp Val Ala Thr Ser Gln Asp Asp Cys Tyr Lys Phe Ala 370 375 380		
Val Ser Gln Ser Ser Thr Gly Thr Val Met Gly Ala Val Ile Met Glu 385 390 395 400		
Gly Phe Tyr Val Val Phe Asp Arg Ala Arg Lys Arg Ile Gly Phe Ala 405 410 415		
Val Ser Ala Cys His Val His Asp Glu Phe Arg Thr Ala Ala Val Glu 420 425 430		
Gly Pro Phe Val Thr Ala Asp Met Glu Asp Cys Gly Tyr Asn Ile Pro 435 440 445		
Gln Thr Asp Glu Ser Thr Leu Met Thr Ile Ala Tyr Val Met Ala Ala 450 455 460		
Ile Cys Ala Leu Phe Met Leu Pro Leu Cys Leu Met Val Cys Gln Trp 465 470 475 480		
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Ile Ser Leu Leu Lys 500		

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<212> DNA
<213> Homo sapiens

<400> 9
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UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
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 DATED : September 14, 2004
 INVENTOR(S) : Mark E. Gurney et al.

Page 15 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

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gaagcogatg atgacgagga cgatgaggat ggtgatgagg tagaggaaga ggotgaggaa 780
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 <212> PRT
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Gln Ile Ala Met Phe Cys Gly Arg Leu Asn Met His Met Asn Val Gln
  35              40              45

Asn Gly Lys Trp Asp Ser Asp Pro Ser Gly Thr Lys Thr Cys Ile Asp
  50              55              60

Thr Lys Glu Gly Ile Leu Gln Tyr Cys Gln Glu Val Tyr Pro Glu Leu
  65              70              75              80

Gln Ile Thr Asn Val Val Glu Ala Asn Gln Pro Val Thr Ile Gln Asn
  85              90              95

Trp Cys Lys Arg Gly Arg Lys Gln Cys Lys Thr His Pro His Phe Val
 100              105              110

Ile Pro Tyr Arg Cys Leu Val Gly Glu Phe Val Ser Asp Ala Leu Leu
 115              120              125

Val Pro Asp Lys Cys Lys Phe Leu His Gln Glu Arg Met Asp Val Cys
 130              135              140

Glu Thr His Leu His Trp His Thr Val Ala Lys Glu Thr Cys Ser Glu
 145              150              155              160

Lys Ser Thr Asn Leu His Asp Tyr Gly Met Leu Leu Pro Cys Gly Ile
 165              170              175
  
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UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 16 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Asp Lys Phe Arg Gly Val Glu Phe Val Cys Cys Pro Leu Ala Glu Glu
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Ser Asp Asn Val Asp Ser Ala Asp Ala Glu Glu Asp Asp Ser Asp Val
195 200 205

Trp Trp Gly Gly Ala Asp Thr Asp Tyr Ala Asp Gly Ser Glu Asp Lys
210 215 220

Val Val Glu Val Ala Glu Glu Glu Glu Val Ala Glu Val Glu Glu Glu
225 230 235 240

Glu Ala Asp Asp Asp Glu Asp Asp Glu Asp Gly Asp Glu Val Glu Glu
245 250 255

Glu Ala Glu Glu Pro Tyr Glu Glu Ala Thr Glu Arg Thr Thr Ser Ile
260 265 270

Ala. Thr Thr Thr Thr Thr Thr Thr Glu Ser Val Glu Glu Val Val Arg
275 280 285

Val Pro Thr Thr Ala Ala Ser Thr Pro Asp Ala Val Asp Lys Tyr Leu
290 295 300

Glu Thr Pro Gly Asp Glu Asn Glu His Ala His Phe Gln Lys Ala Lys
305 310 315 320

Glu Arg Leu Glu Ala Lys His Arg Glu Arg Met Ser Gln Val Met Arg
325 330 335

Glu Trp Glu Glu Ala Glu Arg Gln Ala Lys Asn Leu Pro Lys Ala Asp
340 345 350

Lys Lys Ala Val Ile Gln His Phe Gln Glu Lys Val Glu Ser Leu Glu
355 360 365

Gln Glu Ala Ala Asn Glu Arg Gln Gln Leu Val Glu Thr His Met Ala
370 375 380

Arg Val Glu Ala Met Leu Asn Asp Arg Arg Arg Leu Ala Leu Glu Asn
385 390 395 400

Tyr Ile Thr Ala Leu Gln Ala Val Pro Pro Arg Pro Arg His Val Phe
405 410 415

Asn Met Leu Lys Lys Tyr Val Arg Ala Glu Gln Lys Asp Arg Gln His
420 425 430

Thr Leu Lys His Phe Glu His Val Arg Met Val Asp Pro Lys Lys Ala
435 440 445

Ala Gln Ile Arg Ser Gln Val Met Thr His Leu Arg Val Ile Tyr Glu
450 455 460

Arg Met Asn Gln Ser Leu Ser Leu Leu Tyr Asn Val Pro Ala Val Ala
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Glu Glu Ile Gln Asp Glu Val Asp Glu Leu Leu Gln Lys Glu Gln Asn
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UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 17 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Tyr Ser Asp Asp Val Leu Ala Asn Met Ile Ser Glu Pro Arg Ile Ser
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Tyr Gly Asn Asp Ala Leu Met Pro Ser Leu Thr Glu Thr Lys Thr Thr
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530 535 540

Pro Trp His Ser Phe Gly Ala Asp Ser Val Pro Ala Asn Thr Glu Asn
545 550 555 560

Glu Val Glu Pro Val Asp Ala Arg Pro Ala Ala Asp Arg Gly Leu Thr
565 570 575

Thr Arg Pro Gly Ser Gly Leu Thr Asn Ile Lys Thr Glu Glu Ile Ser
580 585 590

Glu Val Lys Met Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val
595 600 605

His His Gln Lys Leu Val Phe Phe Ala Glu Asp Val Gly Ser Asn Lys
510 615 620

Gly Ala Ile Ile Gly Leu Met Val Gly Gly Val Val Ile Ala Thr Val
625 630 635 640

Ile Val Ile Thr Leu Val Met Leu Lys Lys Lys Gln Tyr Thr Ser Ile
645 650 655

His His Gly Val Val Glu Val Asp Ala Ala Val Thr Pro Glu Glu Arg
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UNITED STATES PATENT AND TRADEMARK OFFICE
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 DATED : September 14, 2004
 INVENTOR(S) : Mark E. Gurney et al.

Page 18 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

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 Asn Gly Lys Trp Asp Ser Asp Pro Ser Gly Thr Lys Thr Cys Ile Asp
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 Gln Ile Thr Asn Val Val Glu Ala Asn Gln Pro Val Thr Ile Gln Asn
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 100 105 110
 Ile Pro Tyr Arg Cys Leu Val Gly Glu Phe Val Ser Asp Ala Leu Leu
 115 120 125
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 130 135 140
 Glu Thr His Leu His Trp His Thr Val Ala Lys Glu Thr Cys Ser Glu
 145 150 155 160
 Lys Ser Thr Asn Leu His Asp Tyr Gly Met Leu Leu Pro Cys Gly Ile
 165 170 175
 Asp Lys Phe Arg Gly Val Glu Phe Val Cys Cys Pro Leu Ala Glu Glu
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UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 19 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Ser Asp Asn Val Asp Ser Ala Asp Ala Glu Glu Asp Asp Ser Asp Val
195 200 205

Trp Trp Gly Gly Ala Asp Thr Asp Tyr Ala Asp Gly Ser Glu Asp Lys
210 215 220

Val Val Glu Val Ala Glu Glu Glu Val Ala Glu Val Glu Glu Glu
225 230 235 240

Glu Ala Asp Asp Asp Glu Asp Asp Glu Asp Gly Asp Glu Val Glu Glu
245 250 255

Glu Ala Glu Glu Pro Tyr Glu Glu Ala Thr Glu Arg Thr Thr Ser Ile
260 265 270

Ala Thr Thr Thr Thr Thr Thr Thr Glu Ser Val Glu Glu Val Val Arg
275 280 285

Val Pro Thr Thr Ala Ala Ser Thr Pro Asp Ala Val Asp Lys Tyr Leu
290 295 300

Glu Thr Pro Gly Asp Glu Asn Glu His Ala His Phe Gln Lys Ala Lys
305 310 315 320

Glu Arg Leu Glu Ala Lys His Arg Glu Arg Met Ser Gln Val Met Arg
325 330 335

Glu Trp Glu Glu Ala Glu Arg Gln Ala Lys Asn Leu Pro Lys Ala Asp
340 345 350

Lys Lys Ala Val Ile Gln His Phe Gln Glu Lys Val Glu Ser Leu Glu
355 360 365

Gln Glu Ala Ala Asn Glu Arg Gln Gln Leu Val Glu Thr His Met Ala
370 375 380

Arg Val Glu Ala Met Leu Asn Asp Arg Arg Arg Leu Ala Leu Glu Asn
385 390 395 400

Tyr Ile Thr Ala Leu Gln Ala Val Pro Pro Arg Pro Arg His Val Phe
405 410 415

Asn Met Leu Lys Lys Tyr Val Arg Ala Glu Gln Lys Asp Arg Gln His
420 425 430

Thr Leu Lys His Phe Glu His Val Arg Met Val Asp Pro Lys Lys Ala
435 440 445

Ala Gln Ile Arg Ser Gln Val Met Thr His Leu Arg Val Ile Tyr Glu
450 455 460

Arg Met Asn Gln Ser Leu Ser Leu Leu Tyr Asn Val Pro Ala Val Ala
465 470 475 480

Glu Glu Ile Gln Asp Glu Val Asp Glu Leu Leu Gln Lys Glu Gln Asn
485 490 495

Tyr Ser Asp Asp Val Leu Ala Asn Met Ile Ser Glu Pro Arg Ile Ser
500 505 510

Tyr Gly Asn Asp Ala Leu Met Pro Ser Leu Thr Glu Thr Lys Thr Thr

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 20 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

515	520	525
Val Glu Leu Leu Pro Val Asn Gly Glu Phe Ser Leu Asp Asp Leu Gln 530 535 540		
Pro Trp His Ser Phe Gly Ala Asp Ser Val Pro Ala Asn Thr Glu Asn 545 550 555 560		
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Thr Arg Pro Gly Ser Gly Leu Thr Asn Ile Lys Thr Glu Glu Ile Ser 580 585 590		
Glu Val Asn Leu Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val 595 600 605		
His His Gln Lys Leu Val Phe Phe Ala Glu Asp Val Gly Ser Asn Lys 610 615 620		
Gly Ala Ile Ile Gly Leu Met Val Gly Gly Val Val Ile Ala Thr Val 625 630 635 640		
Ile Val Ile Thr Leu Val Met Leu Lys Lys Lys Gln Tyr Thr Ser Ile 645 650 655		
His His Gly Val Val Glu Val Asp Ala Ala Val Thr Pro Glu Glu Arg 660 665 670		
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cagatcacca atgtggtaga agccaaccaa ccagtgaacca tccagaactg gtgcaagcgg 300
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UNITED STATES PATENT AND TRADEMARK OFFICE

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PATENT NO. : 6,790,610 B2
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 DATED : September 14, 2004
 INVENTOR(S) : Mark E. Gurney et al.

Page 21 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

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 Asn Gly Lys Trp Asp Ser Asp Pro Ser Gly Thr Lys Thr Cys Ile Asp
 50 55 60
 Thr Lys Glu Gly Ile Leu Gln Tyr Cys Gln Glu Val Tyr Pro Glu Leu
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 115 120 125
 Val Pro Asp Lys Cys Lys Phe Leu His Gln Glu Arg Met Asp Val Cys
 130 135 140
 Glu Thr His Leu His Trp His Thr Val Ala Lys Glu Thr Cys Ser Glu
 145 150 155 160
 Lys Ser Thr Asn Leu His Asp Tyr Gly Met Leu Leu Pro Cys Gly Ile
 165 170 175
 Asp Lys Phe Arg Gly Val Glu Phe Val Cys Cys Pro Leu Ala Glu Glu
 180 185 190
 Ser Asp Asn Val Asp Ser Ala Asp Ala Glu Glu Asp Asp Ser Asp Val
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 Trp Trp Gly Gly Ala Asp Thr Asp Tyr Ala Asp Gly Ser Glu Asp Lys
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UNITED STATES PATENT AND TRADEMARK OFFICE
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PATENT NO. : 6,790,610 B2
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DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 22 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Val Val Glu Val Ala Glu Glu Glu Glu Val Ala Glu Val Glu Glu Glu
225 230 235 240

Glu Ala Asp Asp Asp Glu Asp Asp Glu Asp Gly Asp Glu Val Glu Glu
245 250 255

Glu Ala Glu Glu Pro Tyr Glu Glu Ala Thr Glu Arg Thr Thr Ser Ile
260 265 270

Ala Thr Thr Thr Thr Thr Thr Thr Glu Ser Val Glu Glu Val Val Arg
275 280 285

Val Pro Thr Thr Ala Ala Ser Thr Pro Asp Ala Val Asp Lys Tyr Leu
290 295 300

Glu Thr Pro Gly Asp Glu Asn Glu His Ala His Phe Gln Lys Ala Lys
305 310 315 320

Glu Arg Leu Glu Ala Lys His Arg Glu Arg Met Ser Gln Val Met Arg
325 330 335

Glu Trp Glu Glu Ala Glu Arg Gln Ala Lys Asn Leu Pro Lys Ala Asp
340 345 350

Lys Lys Ala Val Ile Gln His Phe Gln Glu Lys Val Glu Ser Leu Glu
355 360 365

Gln Glu Ala Ala Asn Glu Arg Gln Gln Leu Val Glu Thr His Met Ala
370 375 380

Arg Val Glu Ala Met Leu Asn Asp Arg Arg Arg Leu Ala Leu Glu Asn
385 390 395 400

Tyr Ile Thr Ala Leu Gln Ala Val Pro Pro Arg Pro Arg His Val Phe
405 410 415

Asn Met Leu Lys Lys Tyr Val Arg Ala Glu Gln Lys Asp Arg Gln His
420 425 430

Thr Leu Lys His Phe Glu His Val Arg Met Val Asp Pro Lys Lys Ala
435 440 445

Ala Gln Ile Arg Ser Gln Val Met Thr His Leu Arg Val Ile Tyr Glu
450 455 460

Arg Met Asn Gln Ser Leu Ser Leu Leu Tyr Asn Val Pro Ala Val Ala
465 470 475 480

Glu Glu Ile Gln Asp Glu Val Asp Glu Leu Leu Gln Lys Glu Gln Asn
485 490 495

Tyr Ser Asp Asp Val Leu Ala Asn Met Ile Ser Glu Pro Arg Ile Ser
500 505 510

Tyr Gly Asn Asp Ala Leu Met Pro Ser Leu Thr Glu Thr Lys Thr Thr
515 520 525

Val Glu Leu Leu Pro Val Asn Gly Glu Phe Ser Leu Asp Asp Leu Gln
530 535 540

UNITED STATES PATENT AND TRADEMARK OFFICE
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PATENT NO. : 6,790,610 B2
APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 23 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Pro Trp His Ser Phe Gly Ala Asp Ser Val Pro Ala Asn Thr Glu Asn
545 550 555 560

Glu Val Glu Pro Val Asp Ala Arg Pro Ala Ala Asp Arg Gly Leu Thr
565 570 575

Thr Arg Pro Gly Ser Gly Leu Thr Asn Ile Lys Thr Glu Glu Ile Ser
580 585 590

Glu Val Lys Met Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val
595 600 605

His His Gln Lys Leu Val Phe Phe Ala Glu Asp Val Gly Ser Asn Lys
610 615 620

Gly Ala Ile Ile Gly Leu Met Val Gly Gly Val Val Ile Ala Thr Val
625 630 635 640

Ile Phe Ile Thr Leu Val Met Leu Lys Lys Lys Gln Tyr Thr Ser Ile
645 650 655

His His Gly Val Val Glu Val Asp Ala Ala Val Thr Pro Glu Glu Arg
660 665 670

His Leu Ser Lys Met Gln Gln Asn Gly Tyr Glu Asn Pro Thr Tyr Lys
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Phe Phe Glu Gln Met Gln Asn
690 695

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gaggagattc aggatgaagt tgatgagctg cttcagaaag agcaaaaeta ttcagatgac 1500

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
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DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 24 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

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gaagttgagc ctgttgatgc ccgcctgct gccgaccgag gactgaccac tccaccaggt 1740
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35 40 45
Asn Gly Lys Trp Asp Ser Asp Pro Ser Gly Thr Lys Thr Cys Ile Asp
50 55 60
Thr Lys Glu Gly Ile Leu Gln Tyr Cys Gln Glu Val Tyr Pro Glu Leu
65 70 75 80
Gln Ile Thr Asn Val Val Glu Ala Asn Gln Pro Val Thr Ile Gln Asn
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Trp Cys Lys Arg Gly Arg Lys Gln Cys Lys Thr His Pro His Phe Val
100 105 110
Ile Pro Tyr Arg Cys Leu Val Gly Glu Phe Val Ser Asp Ala Leu Leu
115 120 125
Val Pro Asp Lys Cys Lys Phe Leu His Gln Glu Arg Met Asp Val Cys
130 135 140
Glu Thr His Leu His Trp His Thr Val Ala Lys Glu Thr Cys Ser Glu
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Lys Ser Thr Asn Leu His Asp Tyr Gly Met Leu Leu Pro Cys Gly Ile
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Asp Lys Phe Arg Gly Val Glu Phe Val Cys Cys Pro Leu Ala Glu Glu
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210 215 220
Val Val Glu Val Ala Glu Glu Glu Glu Val Ala Glu Val Glu Glu Glu
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UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 25 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Glu Ala Asp Asp Asp Glu Asp Asp Glu Asp Gly Asp Glu Val Glu Glu
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Glu Ala Glu Glu Pro Tyr Glu Glu Ala Thr Glu Arg Thr Thr Ser Ile
260 265 270

Ala Thr Thr Thr Thr Thr Thr Thr Glu Ser Val Glu Glu Val Val Arg
275 280 285

Val Pro Thr Thr Ala Ala Ser Thr Pro Asp Ala Val Asp Lys Tyr Leu
290 295 300

Glu Thr Pro Gly Asp Glu Asn Glu His Ala His Phe Gln Lys Ala Lys
305 310 315 320

Glu Arg Leu Glu Ala Lys His Arg Glu Arg Met Ser Gln Val Met Arg
325 330 335

Glu Trp Glu Glu Ala Glu Arg Gln Ala Lys Asn Leu Pro Lys Ala Asp
340 345 350

Lys Lys Ala Val Ile Gln His Phe Gln Glu Lys Val Glu Ser Leu Glu
355 360 365

Gln Glu Ala Ala Asn Glu Arg Gln Gln Leu Val Glu Thr His Met Ala
370 375 380

Arg Val Glu Ala Met Leu Asn Asp Arg Arg Arg Leu Ala Leu Glu Asn
385 390 395 400

Tyr Ile Thr Ala Leu Gln Ala Val Pro Pro Arg Pro Arg His Val Phe
405 410 415

Asn Met Leu Lys Lys Tyr Val Arg Ala Glu Gln Lys Asp Arg Gln His
420 425 430

Thr Leu Lys His Phe Glu His Val Arg Met Val Asp Pro Lys Lys Ala
435 440 445

Ala Gln Ile Arg Ser Gln Val Met Thr His Leu Arg Val Ile Tyr Glu
450 455 460

Arg Met Asn Gln Ser Leu Ser Leu Leu Tyr Asn Val Pro Ala Val Ala
465 470 475 480

Glu Glu Ile Gln Asp Glu Val Asp Glu Leu Leu Gln Lys Glu Gln Asn
485 490 495

Tyr Ser Asp Asp Val Leu Ala Asn Met Ile Ser Glu Pro Arg Ile Ser
500 505 510

Tyr Gly Asn Asp Ala Leu Met Pro Ser Leu Thr Glu Thr Lys Thr Thr
515 520 525

Val Glu Leu Leu Pro Val Asn Gly Glu Phe Ser Leu Asp Asp Leu Gln
530 535 540

Pro Trp His Ser Phe Gly Ala Asp Ser Val Pro Ala Asn Thr Glu Asn
545 550 555 560

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CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 26 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Glu Val Glu Pro Val Asp Ala Arg Pro Ala Ala Asp Arg Gly Leu Thr
565 570 575

Thr Arg Pro Gly Ser Gly Leu Thr Asn Ile Lys Thr Glu Glu Ile Ser
580 585 590

Glu Val Lys Met Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val
595 600 605

His His Gln Lys Leu Val Phe Phe Ala Glu Asp Val Gly Ser Asn Lys
610 615 620

Gly Ala Ile Ile Gly Leu Met Val Gly Gly Val Val Ile Ala Thr Val
625 630 635 640

Ile Val Ile Thr Leu Val Met Leu Lys Lys Lys Gln Tyr Thr Ser Ile
645 650 655

His His Gly Val Val Glu Val Asp Ala Ala Val Thr Pro Glu Glu Arg
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His Leu Ser Lys Met Gln Gln Asn Gly Tyr Glu Asn Pro Thr Tyr Lys
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Phe Phe Glu Gln Met Gln Asn Lys Lys
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UNITED STATES PATENT AND TRADEMARK OFFICE
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APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 27 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

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ggttcaaaca aaggtgcaat cattggactc atggtgggag gtgttgatcat agcagacagt 1920
atcgatcata ccttggtgat gctgaagaag aaacagtaca catccattca tcatgggtgtg 1980
gtggaggttg acgcgctgt caccagag gagcgccacc tgtccaagat gcagcagaac 2040
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<400> 18
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Asn Gly Lys Trp Asp Ser Asp Pro Ser Gly Thr Lys Thr Cys Ile Asp
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Thr Lys Glu Gly Ile Ieu Gln Tyr Cys Gln Glu Val Tyr Pro Glu Ieu
65 70 75 80

Gln Ile Thr Asn Val Val Glu Ala Asn Gln Pro Val Thr Ile Gln Asn
85 90 95

Trp Cys Lys Arg Gly Arg Lys Gln Cys Lys Thr His Pro His Phe Val
100 105 110

Ile Pro Tyr Arg Cys Ieu Val Gly Glu Phe Val Ser Asp Ala Ieu Ieu
115 120 125

Val Pro Asp Lys Cys Lys Phe Ieu His Gln Glu Arg Met Asp Val Cys
130 135 140

Glu Thr His Ieu His Trp His Thr Val Ala Lys Glu Thr Cys Ser Glu
145 150 155 160

Lys Ser Thr Asn Ieu His Asp Tyr Gly Met Ieu Ieu Pro Cys Gly Ile
165 170 175

Asp Lys Phe Arg Gly Val Glu Phe Val Cys Cys Pro Ieu Ala Glu Glu
180 185 190

Ser Asp Asn Val Asp Ser Ala Asp Ala Glu Glu Asp Asp Ser Asp Val
195 200 205

Trp Trp Gly Gly Ala Asp Thr Asp Tyr Ala Asp Gly Ser Glu Asp Lys
210 215 220

Val Val Glu Val Ala Glu Glu Glu Glu Val Ala Glu Val Glu Glu Glu
225 230 235 240

Glu Ala Asp Asp Asp Glu Asp Asp Glu Asp Gly Asp Glu Val Glu Glu
245 250 255

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 28 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Glu Ala Glu Glu Pro Tyr Glu Glu Ala Thr Glu Arg Thr Thr Ser Ile
260 265 270

Ala Thr Thr Thr Thr Thr Thr Thr Glu Ser Val Glu Glu Val Val Arg
275 280 285

Val Pro Thr Thr Ala Ala Ser Thr Pro Asp Ala Val Asp Lys Tyr Leu
290 295 300

Glu Thr Pro Gly Asp Glu Asn Glu His Ala His Phe Gln Lys Ala Lys
305 310 315 320

Glu Arg Leu Glu Ala Lys His Arg Glu Arg Met Ser Gln Val Met Arg
325 330 335

Glu Trp Glu Glu Ala Glu Arg Gln Ala Lys Asn Leu Pro Lys Ala Asp
340 345 350

Lys Lys Ala Val Ile Gln His Phe Gln Glu Lys Val Glu Ser Leu Glu
355 360 365

Gln Glu Ala Ala Asn Glu Arg Gln Gln Leu Val Glu Thr His Met Ala
370 375 380

Arg Val Glu Ala Met Leu Asn Asp Arg Arg Arg Leu Ala Leu Glu Asn
385 390 395 400

Tyr Ile Thr Ala Leu Gln Ala Val Pro Pro Arg Pro Arg His Val Phe
405 410 415

Asn Met Leu Lys Lys Tyr Val Arg Ala Glu Gln Lys Asp Arg Gln His
420 425 430

Thr Leu Lys His Phe Glu His Val Arg Met Val Asp Pro Lys Lys Ala
435 440 445

Ala Gln Ile Arg Ser Gln Val Met Thr His Leu Arg Val Ile Tyr Glu
450 455 460

Arg Met Asn Gln Ser Leu Ser Leu Leu Tyr Asn Val Pro Ala Val Ala
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Glu Glu Ile Gln Asp Glu Val Asp Glu Leu Leu Gln Lys Glu Gln Asn
485 490 495

Tyr Ser Asp Asp Val Leu Ala Asn Met Ile Ser Glu Pro Arg Ile Ser
500 505 510

Tyr Gly Asn Asp Ala Leu Met Pro Ser Leu Thr Glu Thr Lys Thr Thr
515 520 525

Val Glu Leu Leu Pro Val Asn Gly Glu Phe Ser Leu Asp Asp Leu Gln
530 535 540

Pro Trp His Ser Phe Gly Ala Asp Ser Val Pro Ala Asn Thr Glu Asn
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Glu Val Glu Pro Val Asp Ala Arg Pro Ala Ala Asp Arg Gly Leu Thr
565 570 575

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DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 29 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Thr Arg Pro Gly Ser Gly Leu Thr Asn Ile Lys Thr Glu Glu Ile Ser
580 585 590
Glu Val Asn Leu Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val
595 600 605
His His Gln Lys Leu Val Phe Phe Ala Glu Asp Val Gly Ser Asn Lys
610 615 620
Gly Ala Ile Ile Gly Leu Met Val Gly Gly Val Val Ile Ala Thr Val
625 630 635 640
Ile Val Ile Thr Leu Val Met Leu Lys Lys Lys Gln Tyr Thr Ser Ile
645 650 655
His His Gly Val Val Glu Val Asp Ala Ala Val Thr Pro Glu Glu Arg
660 665 670
His Leu Ser Lys Met Gln Gln Asn Gly Tyr Glu Asn Pro Thr Tyr Lys
675 680 685
Phe Phe Glu Gln Met Gln Asn Lys Lys
690 695

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<211> 2094
<212> DNA
<213> Homo sapiens

<400> 19
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ctgaacatgc acatgaatgt ccagaatggg aagtgggatt cagatccatc agggaccaaa 180
acctgcattg ataccaagga aggcatoctg cagtattgcc aagaagtcta cctgaactg 240
cagatcacca atgtggtaga agccaacca ccagtgaaca tccagaactg gtgcaagcgg 300
ggccgcgaagc agtgcaagac ccacccccc tttgtgatc cctaccgctg cttagtgggt 360
gagtttgtaa gtgatgcctt tctcgttctt gacaagtga aattcttaca ccaggagagg 420
atggatgttt gcgaaactca tcttcactgg cacaccgtcg ccaagagagac atgcagtggag 480
aagagtaacca acttgcatga ctacggcatg ttgctgccct gcggaattga caagttccga 540
ggggttaggt ttgtgtgttg cccactggct gaagaaagtg acaatgtgga ttctgtgat 600
gcggaggagg atgactcgga tgtctggtgg ggccggagcag acacagacta tgcagatggg 660
agtgaagaca aagtagtaga agtagcagag gaggaagaag tggctgagggt ggaagaagaa 720
gaagccgatg atgacgagga cgtgagggat ggtgatgagg tagaggaaga ggcagaggaa 780
ccctacgaag aagccacaga gagaaccacc agcattgcca ccaccaccac caccaccaca 840
gagtcctggt aagaggtggt tctagttcct acaacagcag ccagtaccoc tcatgocgtt 900
gacaagtatc tctagacacc tggggatgag aatgaacatg cccatttcca gaagaccaaa 960
gagagggttg aggcgaagca ccgagagaga atgtcccagg tcatgagaga atgggaagag 1020
gcagaacgtc aagcaagaa cctgcctaaa gctgataaga aggcagttat ccagcatttc 1080
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tacatcaccc ctctgcaggc tgttcctcct cggcctcgct acgtgttcaa tatgctaaag 1260
aagtatgtcc gcgcagaaca gaaggacaga cagcacaccc taaagcattt cgagcatgtg 1320
cgcattggtg atcccaagaa agccgctcag atccggtccc aggttatgac acacctccgt 1380
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gaggagattc aggatgaagt tgatgagctg cttcagaagg agcaaaaacta ttcagatgac 1500
gtcttggcca acatgattag tgaaccaagg atcagttacg gaaacgatgc totcatgcca 1560
tctttgaccg aaacgaaaac caccgtggag ctcttcccg tgaatggaga gttcagocctg 1620
gacgatctcc agcctggcca ttcttttggg gctgactctg tgccagccaa cacagaaaac 1680
gaagttgagc ctgttgatgc ccgcctgct gccgaaccag gactgaccac tgcaccaggt 1740
tctgggttga caaatatcaa gacggaggag atctctgaag tgaagatgga tgcagaattc 1800
cgacatgact caggatatga agttcatcat caaaaattgg tgttctttgc agaagatgtg 1860
ggttcaaaaa aaggtgcaat cattggactc atgggtggcg gtgtgtcat agcgacagtg 1920

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DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 30 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

atcttcacatca ccttggtgat gctgaagaag aaacagtaca catccattca tcatggtgtg 1980
gtggaggttg acgccgtgt caccacagag gagcgccacc tgtccaagat gcagcagaac 2040
ggctacgaaa atccaaccta caagttcttt gagcagatgc agaacaagaa gtag 2094

<210> 20
<211> 697
<212> PRT
<213> Homo sapiens

<400> 20
Met Leu Pro Gly Leu Ala Leu Leu Leu Leu Ala Ala Trp Thr Ala Arg
1 5 10 15

Ala Leu Glu Val Pro Thr Asp Gly Asn Ala Gly Leu Leu Ala Glu Pro
20 25 30

Gln Ile Ala Met Phe Cys Gly Arg Leu Asn Met His Met Asn Val Gln
35 40 45

Asn Gly Lys Trp Asp Ser Asp Pro Ser Gly Thr Lys Thr Cys Ile Asp
50 55 60

Thr Lys Glu Gly Ile Leu Gln Tyr Cys Gln Glu Val Tyr Pro Glu Leu
65 70 75 80

Gln Ile Thr Asn Val Val Glu Ala Asn Gln Pro Val Thr Ile Gln Asn
85 90 95

Trp Cys Lys Arg Gly Arg Lys Gln Cys Lys Thr His Pro His Phe Val
100 105 110

Ile Pro Tyr Arg Cys Leu Val Gly Glu Phe Val Ser Asp Ala Leu Leu
115 120 125

Val Pro Asp Lys Cys Lys Phe Leu His Gln Glu Arg Met Asp Val Cys
130 135 140

Glu Thr His Leu His Trp His Thr Val Ala Lys Glu Thr Cys Ser Glu
145 150 155 160

Lys Ser Thr Asn Leu His Asp Tyr Gly Met Leu Leu Pro Cys Gly Ile
165 170 175

Asp Lys Phe Arg Gly Val Glu Phe Val Cys Cys Pro Leu Ala Glu Glu
180 185 190

Ser Asp Asn Val Asp Ser Ala Asp Ala Glu Glu Asp Asp Ser Asp Val
195 200 205

Trp Trp Gly Gly Ala Asp Thr Asp Tyr Ala Asp Gly Ser Glu Asp Lys
210 215 220

Val Val Glu Val Ala Glu Glu Glu Glu Val Ala Glu Val Glu Glu Glu
225 230 235 240

Glu Ala Asp Asp Asp Glu Asp Asp Glu Asp Gly Asp Glu Val Glu Glu
245 250 255

Glu Ala Glu Glu Pro Tyr Glu Glu Ala Thr Glu Arg Thr Thr Ser Ile
260 265 270

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DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 31 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Ala Thr Thr Thr Thr Thr Thr Thr Glu Ser Val Glu Glu Val Val Arg
275 280 285

Val Pro Thr Thr Ala Ala Ser Thr Pro Asp Ala Val Asp Lys Tyr Leu
290 295 300

Glu Thr Pro Gly Asp Glu Asn Glu His Ala His Phe Gln Lys Ala Lys
305 310 315 320

Glu Arg Leu Glu Ala Lys His Arg Glu Arg Met Ser Gln Val Met Arg
325 330 335

Glu Trp Glu Glu Ala Glu Arg Gln Ala Lys Asn Leu Pro Lys Ala Asp
340 345 350

Lys Lys Ala Val Ile Gln His Phe Gln Glu Lys Val Glu Ser Leu Glu
355 360 365

Gln Glu Ala Ala Asn Glu Arg Gln Gln Leu Val Glu Thr His Met Ala
370 375 380

Arg Val Glu Ala Met Leu Asn Asp Arg Arg Arg Leu Ala Leu Glu Asn
385 390 395 400

Tyr Ile Thr Ala Leu Gln Ala Val Pro Pro Arg Pro Arg His Val Phe
405 410 415

Asn Met Leu Lys Lys Tyr Val Arg Ala Glu Gln Lys Asp Arg Gln His
420 425 430

Thr Leu Lys His Phe Glu His Val Arg Met Val Asp Pro Lys Lys Ala
435 440 445

Ala Gln Ile Arg Ser Gln Val Met Thr His Leu Arg Val Ile Tyr Glu
450 455 460

Arg Met Asn Gln Ser Leu Ser Leu Leu Tyr Asn Val Pro Ala Val Ala
465 470 475 480

Glu Glu Ile Gln Asp Glu Val Asp Glu Leu Leu Gln Lys Glu Gln Asn
485 490 495

Tyr Ser Asp Asp Val Leu Ala Asn Met Ile Ser Glu Pro Arg Ile Ser
500 505 510

Tyr Gly Asn Asp Ala Leu Met Pro Ser Leu Thr Glu Thr Lys Thr Thr
515 520 525

Val Glu Leu Leu Pro Val Asn Gly Glu Phe Ser Leu Asp Asp Leu Gln
530 535 540

Pro Trp His Ser Phe Gly Ala Asp Ser Val Pro Ala Asn Thr Glu Asn
545 550 555 560

Glu Val Glu Pro Val Asp Ala Arg Pro Ala Ala Asp Arg Gly Leu Thr
565 570 575

Thr Arg Pro Gly Ser Gly Leu Thr Asn Ile Lys Thr Glu Glu Ile Ser
580 585 590

Glu Val Lys Met Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val

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PATENT NO. : 6,790,610 B2
APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 32 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

595 600 605
His His Gln Lys Leu Val Phe Phe Ala Glu Asp Val Gly Ser Asn Lys
610 615 620
Gly Ala Ile Ile Gly Leu Met Val Gly Gly Val Val Ile Ala Thr Val
625 630 635 640
Ile Phe Ile Thr Leu Val Met Leu Lys Lys Lys Gln Tyr Thr Ser Ile
645 650 655
His His Gly Val Val Glu Val Asp Ala Ala Val Thr Pro Glu Glu Arg
660 665 670
His Leu Ser Lys Met Gln Gln Asn Gly Tyr Glu Asn Pro Thr Tyr Lys
675 680 685
Phe Phe Glu Gln Met Gln Asn Lys Lys
690 695

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<212> DNA
<213> Homo sapiens

<400> 21
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gacgaagagc ccgaggagcc cggccggagg ggcagctttg tggagatggt ggacaacctg 180
aggggcaagt cggggcaggg ctactacgtg gagatgaccg tgggcagccc ccgcgagacg 240
ctcaacatcc tgggtggatcc aggcagcagt aactttgcag tgggtgctgc cccccacccc 300
ttcctgcato gctactacca gaggcagctg tccagcacat accgggaact ccggaagggg 360
gtgtatgtgc cctacaccca gggcaagtgg gaaggggago tgggcacoga cotggttaagc 420
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aagttcttca tcaacggctc caactgggaa ggcactcctg ggtgggcta tgcctgagatt 540
gccaggcctg acgactccct ggagccttcc tttgactctc tggtaagca gaaccacgtt 600
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gagatcaatg gacaggatct gaaaatggac tgcaaggagt acaactatga caagagcatt 840
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tccatcaagg cagcctcctc caaggagaag ttcctgatg gttctggct aggagagcag 960
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tcacccacgg gcaactgtat gggagctggt atcatggagg gcttctacgt tgcctttgat 1200
cgggcccga aacgaattgg ctttgcctgc agcgttgcc atgtgcacga tgagttcagg 1260
acggcagcgg tgggaagccc tttgtgcacc ttggacatgg aagactgtgg ctacaacatt 1320
ccacagacag atgagtcagt a 1341

<210> 22
<211> 446
<212> PRT
<213> Homo sapiens

<400> 22
Met Ala Ser Met Thr Gly Gly Gln Gln Met Gly Arg Gly Ser Thr Gln
1 5 10 15
His Gly Ile Arg Leu Pro Leu Arg Ser Gly Leu Gly Gly Ala Pro Leu

UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
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 INVENTOR(S) : Mark E. Gurney et al.

Page 33 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

20	25	30
Gly Leu Arg 35	Leu Pro Arg Glu Thr Asp 40	Glu Glu Pro Glu Glu Pro Gly 45
Arg Arg Gly Ser Phe Val 50	Glu Met Val Asp Asn Leu Arg Gly Lys Ser 55	
Gly Gln Gly Tyr Tyr Val 65	Glu Met Thr Val Gly Ser Pro Pro Gln Thr 70	
Leu Asn Ile Leu Val Asp Thr Gly Ser Ser Asn Phe Ala Val Gly Ala 85		90
Ala Pro His Pro Phe Leu His Arg Tyr Tyr Gln Arg Gln Leu Ser Ser 100		110
Thr Tyr Arg Asp Leu Arg Lys Gly Val Tyr Val Pro Tyr Thr Gln Gly 115		120
Lys Trp Glu Gly Glu Leu Gly Thr Asp Leu Val Ser Ile Pro His Gly 130		135
Pro Asn Val Thr Val Arg Ala Asn Ile Ala Ala Ile Thr Glu Ser Asp 145		150
Lys Phe Phe Ile Asn Gly Ser Asn Trp Glu Gly Ile Leu Gly Leu Ala 165		170
Tyr Ala Glu Ile Ala Arg Pro Asp Asp Ser Leu Glu Pro Phe Phe Asp 180		185
Ser Leu Val Lys Gln Thr His Val Pro Asn Leu Phe Ser Leu His Leu 195		200
Cys Gly Ala Gly Phe Pro Leu Asn Gln Ser Glu Val Leu Ala Ser Val 210		215
Gly Gly Ser Met Ile Ile Gly Gly Ile Asp His Ser Leu Tyr Thr Gly 225		230
Ser Leu Trp Tyr Thr Pro Ile Arg Arg Glu Trp Tyr Tyr Glu Val Ile 245		250
Ile Val Arg Val Glu Ile Asn Gly Gln Asp Leu Lys Met Asp Cys Lys 260		265
Glu Tyr Asn Tyr Asp Lys Ser Ile Val Asp Ser Gly Thr Thr Asn Leu 275		280
Arg Leu Pro Lys Lys Val Phe Glu Ala Ala Val Lys Ser Ile Lys Ala 290		295
Ala Ser Ser Thr Glu Lys Phe Pro Asp Gly Phe Trp Leu Gly Glu Gln 305		310
Leu Val Cys Trp Gln Ala Gly Thr Thr Pro Trp Asn Ile Phe Pro Val 325		330
Ile Ser Leu Tyr Leu Met Gly Glu Val Thr Asn Gln Ser Phe Arg Ile 340		345
		350

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PATENT NO. : 6,790,610 B2
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DATED : September 14, 2004
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Page 34 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Thr Ile Leu Pro Gln Gln Tyr Leu Arg Pro Val Glu Asp Val Ala Thr
355 360 365
Ser Gln Asp Asp Cys Tyr Lys Phe Ala Ile Ser Gln Ser Ser Thr Gly
370 375 380
Thr Val Met Gly Ala Val Ile Met Glu Gly Phe Tyr Val Val Phe Asp
385 390 395 400
Arg Ala Arg Lys Arg Ile Gly Phe Ala Val Ser Ala Cys His Val His
405 410 415
Asp Glu Phe Arg Thr Ala Ala Val Glu Gly Pro Phe Val Thr Leu Asp
420 425 430
Met Glu Asp Cys Gly Tyr Asn Ile Pro Gln Thr Asp Glu Ser
435 440 445

<210> 23
<211> 1380
<212> DNA
<213> Homo sapiens

<400> 23
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ggggggcccc ccttggggct ggggtgccc cgggagaccg acgaagagcc cagggagccc 180
ggccggaggg gcagotttgt ggagatgggt gacaacctga ggggcaagtc ggggcagggc 240
tactacgtgg agatgacgtt gggcagcccc ccgcagacgc tcaacatcct ggtggatata 300
ggcagcagta actttgcagt ggggtgctgcc cccacccct tctgcatcg ctactaccag 360
aggcagctgt ccagcacata cggggacctc cgggaagggtg tgtatgtgcc ctacaccag 420
ggcaagtggg aaggggagct gggcacggac ctggttaagca tcccccatgg ccccaacgtc 480
actgtgcgtg ccaacattgc tgccatcact gaacacagca agttcttcat caacggctcc 540
aaatgggaag gaactcctgg gtggcctat gctgagattg ccaggcctga cgaactccctg 600
gagcctttct ttgactctct ggtaaagcag acccacgttc ccaacctctt ctccctgcac 660
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cggcgggagt ggtattatga ggtcatcatt gtgcgggtgg agatcaatgg acaggatctg 840
aaaatggagt gcaaggagta caactatgao aagagcattg tggacagtgg caaccaccaac 900
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tttgcgtgca gcgcttgcca tgtgcacgat gagttcagga cggcagcggg ggaaggccct 1320
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<210> 24
<211> 459
<212> PRT
<213> Homo sapiens

<400> 24
Met Ala Ser Met Thr Gly Gly Gln Gln Met Gly Arg Gly Ser Met Thr
1 5 10 15
Ile Ser Asp Ser Pro Arg Glu Gln Asp Gly Ser Thr Gln His Gly Ile
20 25 30
Arg Leu Pro Leu Arg Ser Gly Leu Gly Gly Ala Pro Leu Gly Leu Arg

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DATED : September 14, 2004
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Page 35 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

35	40	45
Leu Pro Arg Glu Thr Asp Glu Glu Pro Glu Glu Pro Gly Arg Arg Gly		
50	55	60
Ser Phe Val Glu Met Val Asp Asn Leu Arg Gly Lys Ser Gly Gln Gly		
65	70	75
Tyr Tyr Val Glu Met Thr Val Gly Ser Pro Pro Gln Thr Leu Asn Ile		
85	90	95
Leu Val Asp Thr Gly Ser Ser Asn Phe Ala Val Gly Ala Ala Pro His		
100	105	110
Pro Phe Leu His Arg Tyr Tyr Gln Arg Gln Leu Ser Ser Thr Tyr Arg		
115	120	125
Asp Leu Arg Lys Gly Val Tyr Val Pro Tyr Thr Gln Gly Lys Trp Glu		
130	135	140
Gly Glu Leu Gly Thr Asp Leu Val Ser Ile Pro His Gly Pro Asn Val		
145	150	155
Thr Val Arg Ala Asn Ile Ala Ala Ile Thr Glu Ser Asp Lys Phe Phe		
165	170	175
Ile Asn Gly Ser Asn Trp Glu Gly Ile Leu Gly Leu Ala Tyr Ala Glu		
180	185	190
Ile Ala Arg Pro Asp Asp Ser Leu Glu Pro Phe Phe Asp Ser Leu Val		
195	200	205
Lys Gln Thr His Val Pro Asn Leu Phe Ser Leu His Leu Cys Gly Ala		
210	215	220
Gly Phe Pro Leu Asn Gln Ser Glu Val Leu Ala Ser Val Gly Gly Ser		
225	230	235
Met Ile Ile Gly Gly Ile Asp His Ser Leu Tyr Thr Gly Ser Leu Trp		
245	250	255
Tyr Thr Pro Ile Arg Arg Glu Trp Tyr Tyr Glu Val Ile Ile Val Arg		
260	265	270
Val Glu Ile Asn Gly Gln Asp Leu Lys Met Asp Cys Lys Glu Tyr Asn		
275	280	285
Tyr Asp Lys Ser Ile Val Asp Ser Gly Thr Thr Asn Leu Arg Leu Pro		
290	295	300
Lys Lys Val Phe Glu Ala Ala Val Lys Ser Ile Lys Ala Ala Ser Ser		
305	310	315
Thr Glu Lys Phe Pro Asp Gly Phe Trp Leu Gly Glu Gln Leu Val Cys		
325	330	335
Trp Gln Ala Gly Thr Thr Pro Trp Asn Ile Phe Pro Val Ile Ser Leu		
340	345	350
Tyr Leu Met Gly Glu Val Thr Asn Gln Ser Phe Arg Ile Thr Ile Leu		
355	360	365

UNITED STATES PATENT AND TRADEMARK OFFICE
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DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 36 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Pro Gln Gln Tyr Leu Arg Pro Val Glu Asp Val Ala Thr Ser Gln Asp
370 375 380

Asp Cys Tyr Lys Phe Ala Ile Ser Gln Ser Ser Thr Gly Thr Val Met
385 390 395 400

Gly Ala Val Ile Met Glu Gly Phe Tyr Val Val Phe Asp Arg Ala Arg
405 410 415

Lys Arg Ile Gly Phe Ala Val Ser Ala Cys His Val His Asp Glu Phe
420 425 430

Arg Thr Ala Ala Val Glu Gly Pro Phe Val Thr Leu Asp Met Glu Asp
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Cys Gly Tyr Asn Ile Pro Gln Thr Asp Glu Ser
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<211> 1302
<212> DNA
<213> Homo sapiens

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gaccactcgc tgtacacagg cagtctctgg tatacaccca tccggcggga gtggtattat 720
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<210> 26
<211> 433
<212> PRT
<213> Homo sapiens

<400> 26
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Ala Pro Leu Gly Leu Arg Leu Pro Arg Glu Thr Asp Glu Glu Pro Glu
20 25 30

Gly Pro Gly Arg Arg Gly Ser Phe Val Glu Met Val Asp Asn Leu Arg
35 40 45

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
 APPLICATION NO. : 09/869414
 DATED : September 14, 2004
 INVENTOR(S) : Mark E. Gurney et al.

Page 37 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Gly	Lys	Ser	Gly	Gln	Gly	Tyr	Tyr	Val	Glu	Met	Thr	Val	Gly	Ser	Pro
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Pro	Gln	Thr	Leu	Asn	Ile	Leu	Val	Asp	Thr	Gly	Ser	Ser	Asn	Phe	Ala
65				70						75					80
Val	Gly	Ala	Ala	Pro	His	Pro	Phe	Leu	His	Arg	Tyr	Tyr	Gln	Arg	Gln
				85						90				95	
Leu	Ser	Ser	Thr	Tyr	Arg	Asp	Leu	Arg	Lys	Gly	Val	Tyr	Val	Pro	Tyr
			100					105					110		
Thr	Gln	Gly	Lys	Trp	Glu	Gly	Glu	Leu	Gly	Thr	Asp	Leu	Val	Ser	Ile
		115					120					125			
Pro	His	Gly	Pro	Asn	Val	Thr	Val	Arg	Ala	Asn	Ile	Ala	Ala	Ile	Thr
		130				135					140				
Glu	Ser	Asp	Lys	Phe	Phe	Ile	Asn	Gly	Ser	Asn	Trp	Glu	Gly	Ile	Leu
145					150					155					160
Gly	Leu	Ala	Tyr	Ala	Glu	Ile	Ala	Arg	Pro	Asp	Asp	Ser	Leu	Glu	Pro
				165					170					175	
Phe	Phe	Asp	Ser	Leu	Val	Lys	Gln	Thr	His	Val	Pro	Asn	Leu	Phe	Ser
			180					185					190		
Leu	His	Leu	Cys	Gly	Ala	Gly	Phe	Pro	Leu	Asn	Gln	Ser	Glu	Val	Leu
		195					200					205			
Ala	Ser	Val	Gly	Gly	Ser	Met	Ile	Ile	Gly	Gly	Ile	Asp	His	Ser	Leu
		210				215					220				
Tyr	Thr	Gly	Ser	Leu	Trp	Tyr	Thr	Pro	Ile	Arg	Arg	Glu	Trp	Tyr	Tyr
225					230					235					240
Glu	Val	Ile	Ile	Val	Arg	Val	Glu	Ile	Asn	Gly	Gln	Asp	Leu	Lys	Met
				245					250					255	
Asp	Cys	Lys	Glu	Tyr	Asn	Tyr	Asp	Lys	Ser	Ile	Val	Asp	Ser	Gly	Thr
			260					265					270		
Thr	Asn	Leu	Arg	Leu	Pro	Lys	Lys	Val	Phe	Glu	Ala	Ala	Val	Lys	Ser
		275					280					285			
Ile	Lys	Ala	Ala	Ser	Ser	Thr	Glu	Lys	Phe	Pro	Asp	Gly	Phe	Trp	Leu
		290				295						300			
Gly	Glu	Gln	Leu	Val	Cys	Trp	Gln	Ala	Gly	Thr	Thr	Pro	Trp	Asn	Ile
305					310					315					320
Phe	Pro	Val	Ile	Ser	Leu	Tyr	Leu	Met	Gly	Glu	Val	Thr	Asn	Gln	Ser
				325					330					335	
Phe	Arg	Ile	Thr	Ile	Leu	Pro	Gln	Gln	Tyr	Leu	Arg	Pro	Val	Glu	Asp
			340					345					350		
Val	Ala	Thr	Ser	Gln	Asp	Asp	Cys	Tyr	Lys	Phe	Ala	Ile	Ser	Gln	Ser
		355					360					365			
Ser	Thr	Gly	Thr	Val	Met	Gly	Ala	Val	Ile	Met	Glu	Gly	Phe	Tyr	Val
		370				375					380				

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INVENTOR(S) : Mark E. Gurney et al.

Page 38 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Val Phe Asp Arg Ala Arg Lys Arg Ile Gly Phe Ala Val Ser Ala Cys
385 390 395 400

His Val His Asp Glu Phe Arg Thr Ala Ala Val Glu Gly Pro Phe Val
405 410 415

Thr Leu Asp Met Glu Asp Cys Gly Tyr Asn Ile Pro Gln Thr Asp Glu
420 425 430

Ser

<210> 27
<211> 1278
<212> DNA
<213> Homo sapiens

<400> 27
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ggcaagtcgg ggcagggtcta ctacgtggag atgacgtgg gcagcccccc gcagacgtct 180
aacatccctgg tggatacagg cagcagtaac tttgcagtgg gtgctgcccc ccccccttc 240
ctgcatcgct actaccagag gcagctgtcc agcacatacc gggacctccg gaagggtgtg 300
tatgtgacct acacccaggg caagtgggaa ggggagctgg gcacogacct ggtaagcatc 360
ccccatggcc ccaacgtcac tgtgcgtgcc aacattgctg coactactga atcagacaag 420
ttcttcatac acggctccaa ctgggaaggc atcctggggc tggcctatgc tgagattgcc 480
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gcctctgtcg gaggagcat gatcattgga ggtatcgacc actcgtctga cacaggcagt 660
ctctgtgata caccatccg gcgggagtggt tattatgagg tcatcattgt gcgggtggag 720
atcaatggac aggatctgaa aatggactgc aaggagtaca actatgacaa gagcattgtg 780
gacagtggca ccaccaacct tcgtttgcc aagaaagtgt ttgaagctgc agtcaaatcc 840
atcaaggcag cctcctccac ggagaagttc cctgatggtt tctggctagg agagcagctg 900
gtgtgctggc aagcaggcac caccctctgg aacattttcc cagtcattct actctaccta 960
atgggtgagg ttaccaacca gtccttcgc atcaccatcc ttccgcagca atacctcgg 1020
ccagtggag atgtggcac gtcccaagac gactgttaoa agtttgcct ctcacagtc 1080
tccacgggca ctgttatggg agctgttatc atggagggtc tctacgttgt ctttgatcgg 1140
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cagacagatg agtcatga 1278

<210> 28
<211> 425
<212> PRT
<213> Homo sapiens

<400> 28
Met Ala Ser Met Thr Gly Gly Gln Gln Met Gly Arg Gly Ser Met Thr
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Ile Ser Asp Ser Pro Leu Asp Ser Gly Ile Glu Thr Asp Gly Ser Phe
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Val Glu Met Val Asp Asn Leu Arg Gly Lys Ser Gly Gln Gly Tyr Tyr
35 40 45
Val Glu Met Thr Val Gly Ser Pro Pro Gln Thr Leu Asn Ile Leu Val
50 55 60
Asp Thr Gly Ser Ser Asn Phe Ala Val Gly Ala Ala Pro His Pro Phe
65 70 75 80
Leu His Arg Tyr Tyr Gln Arg Gln Leu Ser Ser Thr Tyr Arg Asp Leu
85 90 95

UNITED STATES PATENT AND TRADEMARK OFFICE

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 DATED : September 14, 2004
 INVENTOR(S) : Mark E. Gurney et al.

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It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

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Arg Lys Gly Val Tyr Val Pro Tyr Thr Gln Gly Lys Trp Glu Gly Glu
      100                      105                      110

Leu Gly Thr Asp Leu Val Ser Ile Pro His Gly Pro Asn Val Thr Val
      115                      120                      125

Arg Ala Asn Ile Ala Ala Ile Thr Glu Ser Asp Lys Phe Phe Ile Asn
      130                      135                      140

Gly Ser Asn Trp Glu Gly Ile Leu Gly Leu Ala Tyr Ala Glu Ile Ala
      145                      150                      155                      160

Arg Pro Asp Asp Ser Leu Glu Pro Phe Phe Asp Ser Leu Val Lys Gln
      165                      170                      175

Thr His Val Pro Asn Leu Phe Ser Leu His Leu Cys Gly Ala Gly Phe
      180                      185                      190

Pro Leu Asn Gln Ser Glu Val Leu Ala Ser Val Gly Gly Ser Met Ile
      195                      200                      205

Ile Gly Gly Ile Asp His Ser Leu Tyr Thr Gly Ser Leu Trp Tyr Thr
      210                      215                      220

Pro Ile Arg Arg Glu Trp Tyr Tyr Glu Val Ile Ile Val Arg Val Glu
      225                      230                      235                      240

Ile Asn Gly Gln Asp Leu Lys Met Asp Cys Lys Glu Tyr Asn Tyr Asp
      245                      250                      255

Lys Ser Ile Val Asp Ser Gly Thr Thr Asn Leu Arg Leu Pro Lys Lys
      260                      265                      270

Val Phe Glu Ala Ala Val Lys Ser Ile Lys Ala Ala Ser Ser Thr Glu
      275                      280                      285

Lys Phe Pro Asp Gly Phe Trp Leu Gly Glu Gln Leu Val Cys Trp Gln
      290                      295                      300

Ala Gly Thr Thr Pro Trp Asn Ile Phe Pro Val Ile Ser Leu Tyr Leu
      305                      310                      315                      320

Met Gly Glu Val Thr Asn Gln Ser Phe Arg Ile Thr Ile Leu Pro Gln
      325                      330                      335

Gln Tyr Leu Arg Pro Val Glu Asp Val Ala Thr Ser Gln Asp Asp Cys
      340                      345                      350

Tyr Lys Phe Ala Ile Ser Gln Ser Ser Thr Gly Thr Val Met Gly Ala
      355                      360                      365

Val Ile Met Glu Gly Phe Tyr Val Val Phe Asp Arg Ala Arg Lys Arg
      370                      375                      380

Ile Gly Phe Ala Val Ser Ala Cys His Val His Asp Glu Phe Arg Thr
      385                      390                      395                      400

Ala Ala Val Glu Gly Pro Phe Val Thr Leu Asp Met Glu Asp Cys Gly
      405                      410                      415

Tyr Asn Ile Pro Gln Thr Asp Glu Ser
      420                      425
  
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UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

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It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

<210> 29
<211> 1362
<212> DNA
<213> Homo sapiens

<400> 29
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gtggagatgg tggacaacct gaggggcaag tcggggcagg gctactacgt ggagatgacc 240
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tggggtgtg ccccccaccc ctctctgcat cgctactacc agaggcagct gtccagcaca 360
taccgggacc tccggaaggg tgtgtatgtg ccctacaccc agggcaagtg ggaaggggag 420
ctgggcaccg acctggtaag catcccccat ggccccaacg tctactgtcg tgccaacatt 480
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<210> 30
<211> 453
<212> PRT
<213> Homo sapiens

<400> 30
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20 25 30
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35 40 45
Glu Glu Pro Glu Glu Pro Gly Arg Arg Gly Ser Phe Val Glu Met Val
50 55 60
Asp Asn Leu Arg Gly Lys Ser Gly Gln Gly Tyr Tyr Val Glu Met Thr
65 70 75 80
Val Gly Ser Pro Pro Gln Thr Leu Asn Ile Leu Val Asp Thr Gly Ser
85 90 95
Ser Asn Phe Ala Val Gly Ala Ala Pro His Pro Phe Leu His Arg Tyr
100 105 110
Tyr Gln Arg Gln Leu Ser Ser Thr Tyr Arg Asp Leu Arg Lys Gly Val
115 120 125
Tyr Val Pro Tyr Thr Gln Gly Lys Trp Glu Gly Glu Leu Gly Thr Asp
130 135 140

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
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DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 41 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Leu Val Ser Ile Pro His Gly Pro Asn Val Thr Val Arg Ala Asn Ile
145 150 155 160

Ala Ala Ile Thr Glu Ser Asp Lys Phe Phe Ile Asn Gly Ser Asn Trp
165 170 175

Glu Gly Ile Leu Gly Leu Ala Tyr Ala Glu Ile Ala Arg Pro Asp Asp
180 185 190

Ser Leu Glu Pro Phe Phe Asp Ser Leu Val Lys Gln Thr His Val Pro
195 200 205

Asn Leu Phe Ser Leu Gln Leu Cys Gly Ala Gly Phe Pro Leu Asn Gln
210 215 220

Ser Glu Val Leu Ala Ser Val Gly Gly Ser Met Ile Ile Gly Gly Ile
225 230 235 240

Asp His Ser Leu Tyr Thr Gly Ser Leu Trp Tyr Thr Pro Ile Arg Arg
245 250 255

Glu Trp Tyr Tyr Glu Val Ile Ile Val Arg Val Glu Ile Asn Gly Gln
260 265 270

Asp Leu Lys Met Asp Cys Lys Glu Tyr Asn Tyr Asp Lys Ser Ile Val
275 280 285

Asp Ser Gly Thr Thr Asn Leu Arg Leu Pro Lys Lys Val Phe Glu Ala
290 295 300

Ala Val Lys Ser Ile Lys Ala Ala Ser Ser Thr Glu Lys Phe Pro Asp
305 310 315 320

Gly Phe Trp Leu Gly Glu Gln Leu Val Cys Trp Gln Ala Gly Thr Thr
325 330 335

Pro Trp Asn Ile Phe Pro Val Ile Ser Leu Tyr Leu Met Gly Glu Val
340 345 350

Thr Asn Gln Ser Phe Arg Ile Thr Ile Leu Pro Gln Gln Tyr Leu Arg
355 360 365

Pro Val Glu Asp Val Ala Thr Ser Gln Asp Asp Cys Tyr Lys Phe Ala
370 375 380

Ile Ser Gln Ser Ser Thr Gly Thr Val Met Gly Ala Val Ile Met Glu
385 390 395 400

Gly Phe Tyr Val Val Phe Asp Arg Ala Arg Lys Arg Ile Gly Phe Ala
405 410 415

Val Ser Ala Cys His Val His Asp Glu Phe Arg Thr Ala Ala Val Glu
420 425 430

Gly Pro Phe Val Thr Leu Asp Met Glu Asp Cys Gly Tyr Asn Ile Pro
435 440 445

Gln Thr Asp Glu Ser
450

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 42 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

<210> 31
<211> 1380
<212> DNA
<213> Homo sapiens

<400> 31
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ctgcggtgctg cccgggagag cgacgaagag cccgaggagc cgggcccggag gggcagcttt 180
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gtgggagcag ccccgagagc gctcaacatc ctggtggata caggcagcag taactttgca 300
gtgggtgctg ccccccaccc ctctcctgcat cgctactacc agaggcagct gtccagcaca 360
tacgggggacc tccggaagggt tgtgtatgtg cctacacccc agggcaagtg ggaaggggag 420
ctgggacacc acctggttaag catcccccat ggcccacacg tcaactgtgc tgccaacatt 480
gctgcatca ctgaatcaga caagtctctc atcaacggct ccaactggga aggcattcctg 540
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cccctcaacc agtctgaagt gctggcctct gtccggagga gcatgatcat tggaggtatc 720
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ggcttctacg ttgtctttga tccggcccgga aaacgaattg gctttgctgt cagcgcttgc 1260
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<210> 32
<211> 459
<212> PRT
<213> Homo sapiens

<400> 32
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20 25 30
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35 40 45
Glu Glu Pro Glu Glu Pro Gly Arg Arg Gly Ser Phe Val Glu Met Val
50 55 60
Asp Asn Leu Arg Gly Lys Ser Gly Gln Gly Tyr Tyr Val Glu Met Thr
65 70 75 80
Val Gly Ser Pro Pro Gln Thr Leu Asn Ile Leu Val Asp Thr Gly Ser
85 90 95
Ser Asn Phe Ala Val Gly Ala Ala Pro His Pro Phe Leu His Arg Tyr
100 105 110
Tyr Gln Arg Gln Leu Ser Ser Thr Tyr Arg Asp Leu Arg Lys Gly Val
115 120 125
Tyr Val Pro Tyr Thr Gln Gly Lys Trp Glu Gly Glu Leu Gly Thr Asp
130 135 140

UNITED STATES PATENT AND TRADEMARK OFFICE
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DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 43 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Leu Val Ser Ile Pro His Gly Pro Asn Val Thr Val Arg Ala Asn Ile
145 150 155 160

Ala Ala Ile Thr Glu Ser Asp Lys Phe Phe Ile Asn Gly Ser Asn Trp
165 170 175

Glu Gly Ile Leu Gly Leu Ala Tyr Ala Glu Ile Ala Arg Pro Asp Asp
180 185 190

Ser Leu Glu Pro Phe Phe Asp Ser Leu Val Lys Gln Thr His Val Pro
195 200 205

Asn Leu Phe Ser Leu Gln Leu Cys Gly Ala Gly Phe Pro Leu Asn Gln
210 215 220

Ser Glu Val Leu Ala Ser Val Gly Gly Ser Met Ile Ile Gly Gly Ile
225 230 235 240

Asp His Ser Leu Tyr Thr Gly Ser Leu Trp Tyr Thr Pro Ile Arg Arg
245 250 255

Glu Trp Tyr Tyr Glu Val Ile-Ile Val Arg Val Glu Ile Asn Gly Gln
260 265 270

Asp Leu Lys Met Asp Cys Lys Glu Tyr Asn Tyr Asp Lys Ser Ile Val
275 280 285

Asp Ser Gly Thr Thr Asn Leu Arg Leu Pro Lys Lys Val Phe Glu Ala
290 295 300

Ala Val Lys Ser Ile Lys Ala Ala Ser Ser Thr Glu Lys Phe Pro Asp
305 310 315 320

Gly Phe Trp Leu Gly Glu Gln Leu Val Cys Trp Gln Ala Gly Thr Thr
325 330 335

Pro Trp Asn Ile Phe Pro Val Ile Ser Leu Tyr Leu Met Gly Glu Val
340 345 350

Thr Asn Gln Ser Phe Arg Ile Thr Ile Leu Pro Gln Gln Tyr Leu Arg
355 360 365

Pro Val Glu Asp Val Ala Thr Ser Gln Asp Asp Cys Tyr Lys Phe Ala
370 375 380

Ile Ser Gln Ser Ser Thr Gly Thr Val Met Gly Ala Val Ile Met Glu
385 390 395 400

Gly Phe Tyr Val Val Phe Asp Arg Ala Arg Lys Arg Ile Gly Phe Ala
405 410 415

Val Ser Ala Cys His Val His Asp Glu Phe Arg Thr Ala Ala Val Glu
420 425 430

Gly Pro Phe Val Thr Leu Asp Met Glu Asp Cys Gly Tyr Asn Ile Pro
435 440 445

Gln Thr Asp Glu Ser His His His His His His
450 455

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

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It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

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<211> 25
<212> PRT
<213> Homo sapiens

<400> 33
Ser Glu Gln Gln Arg Arg Pro Arg Asp Pro Glu Val Val Asn Asp Glu
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Ser Ser Leu Val Arg His Arg Trp Lys
20 25

<210> 34
<211> 19
<212> PRT
<213> Homo sapiens

<400> 34
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1 5 10 15
Leu Leu Lys

<210> 35
<211> 29
<212> DNA
<213> Homo sapiens

<400> 35
gtggatccac ccagcacggc atccggctg 29

<210> 36
<211> 36
<212> DNA
<213> Homo sapiens

<400> 36
gaaagctttc atgactcadc tgtctgtgga atgttg 36

<210> 37
<211> 39
<212> DNA
<213> Homo sapiens

<400> 37
gatcgatgac tatctctgac tctccgctg aacaggacg 39

<210> 38
<211> 39
<212> DNA
<213> Homo sapiens

<400> 38
gatccgtcct gttcacgagg agagtcagag atagtcac 39

<210> 39
<211> 77
<212> DNA
<213> Artificial Sequence

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

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It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

<220>

<223> Description of Artificial Sequence: Hu-Asp2

<400> 39

cggcatccgg ctgccctgc gtagcggctc gggagggtc cactgggtc tgcgtctgcc 60
cgggagacc gacgaag 77

<210> 40

<211> 77

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Hu-Asp2

<400> 40

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ggggcagccg gatgccg 77

<210> 41

<211> 51

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Caspase 8
Cleavage Site

<400> 41

gatcgatgac tatctctgac tctccgtgg actctggtat cgaaaccgac g 51

<210> 42

<211> 51

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Caspase 8
Cleavage Site

<400> 42

gatccgtcgg ttccgatacc agagtccagc ggagagtcag agatagtcac c 51

<210> 43

<211> 32

<212> DNA

<213> Homo sapiens

<400> 43

aaggatcctt tgggagatg ggggacaacc tg 32

<210> 44

<211> 36

<212> DNA

<213> Homo sapiens

<400> 44

gaaagcttcc atgactcacc tgtctgtgga atgttg 36

<210> 45

<211> 24

<212> DNA

<213> Artificial Sequence

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

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It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

<220>
<223> Description of Artificial Sequence: 6-His tag

<400> 45
gatcgcatca tcacccatcac catg 24

<210> 46
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: 6-His tag

<400> 46
gatccatggt gatggtgatg atgc 24

<210> 47
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 47
gactgaccac tcgaccaggt tc 22

<210> 48
<211> 51
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 48
cgaattaaat tccagcacac tggctacttc ttgttctgca tctcaaagaa c 51

<210> 49
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 49
cgaattaaat tccagcacac tggcta 26

<210> 50
<211> 1287
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Hu-Asp2(b)
delta TM

<400> 50
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ggcaccacagc acggcatccg gctgcccctg cgcagcggcc tgggggggag cccctggggg 120
ctgcggctgc cccgggagac cgacgaagag cccgaggagc cgggcccggg gggcagcttt 180

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 47 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

```
gtggagatgg tggacaacct gaggggcaag tcggggcagg gctactacgt ggagatgacc 240
gtgggcagcc ccccgccagac gctcaacatc ctgggtggata caggcagcag taactttgca 300
gtgggtgctg ccccccaccc cttctgcat cgctactacc agaggcagct gtccagcaca 360
taccggggacc tccggaaggg tgtgtatgtg ccctacaccc agggcaagtg ggaaggggag 420
ctggggcaccc acctggttaag catcccccat ggccccaacg tcactgtgctg tgccaacatt 480
getgccatca ctgaatcaga caagtctctc atcaacggct ccaactggga aggcattctg 540
gggctggcct atgetgagat tgccaggctt tgtggtgctg gcttccccct caaccagtct 600
gaagtgtctg cctctgtctg agggagcatg atcattggag gtatcgacca ctgctgtac 660
acaggcagtc tctgttatac acccatccgg cgggagtgtt attatgaggt catcattgtg 720
cgggtggaga tcaatggaca ggaatctgaaa atggactgca aggagtacaa ctatgacaag 780
agcattgtgg acagtggcac caccaacctt cgtttgcccc agaaagtgtt tgaagctgca 840
gtcaaatcca tcaaggcagc ctctccacg gagaagtcc ctgatgggtt ctggctagga 900
gagcagctgg tgtgctggca agcaggcacc accccttgga acattttccc agtcattctca 960
ctctacctaa tgggtgaggt taccacccag tccttccgca tcaccatcct tccgcagcaa 1020
tacctcgccg cagtggaga tgtggccacg tcccaagacg actgttacaa gtttgccatc 1080
tcacagtcac ccacgggcac tgttatggga gctgttatca tggagggtt ctacgttgtc 1140
tttgatcggg cccgaaaacg aattggcttt gctgtcagcg cttgccatgt gcacgatgag 1200
tccaggacgg cagcggtgga aggcctttt gtcacctgg acatggaaga ctgtggctac 1260
aacattccac agacagatga gtcatga 1287
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<210> 51
<211> 428
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Hu-Asp2(b)
delta TM

<400> 51
Met Ala Gln Ala Leu Pro Trp Leu Leu Trp Met Gly Ala Gly Val
1 5 10 15
Leu Pro Ala His Gly Thr Gln His Gly Ile Arg Leu Pro Leu Arg Ser
20 25 30
Gly Leu Gly Gly Ala Pro Leu Gly Leu Arg Leu Pro Arg Glu Thr Asp
35 40 45
Glu Glu Pro Glu Glu Pro Gly Arg Arg Gly Ser Phe Val Glu Met Val
50 55 60
Asp Asn Leu Arg Gly Lys Ser Gly Gln Gly Tyr Tyr Val Glu Met Thr
65 70 75 80
Val Gly Ser Pro Pro Gln Thr Leu Asn Ile Leu Val Asp Thr Gly Ser
85 90 95
Ser Asn Phe Ala Val Gly Ala Ala Pro His Pro Phe Leu His Arg Tyr
100 105 110
Tyr Gln Arg Gln Leu Ser Ser Thr Tyr Arg Asp Leu Arg Lys Gly Val
115 120 125
Tyr Val Pro Tyr Thr Gln Gly Lys Trp Glu Gly Glu Leu Gly Thr Asp
130 135 140
Leu Val Ser Ile Pro His Gly Pro Asn Val Thr Val Arg Ala Asn Ile
145 150 155 160
Ala Ala Ile Thr Glu Ser Asp Lys Phe Phe Ile Asn Gly Ser Asn Trp
165 170 175

UNITED STATES PATENT AND TRADEMARK OFFICE
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DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

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It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Glu Gly Ile Leu Gly Leu Ala Tyr Ala Glu Ile Ala Arg Leu Cys Gly
180 185 190
Ala Gly Phe Pro Leu Asn Gln Ser Glu Val Leu Ala Ser Val Gly Gly
195 200 205
Ser Met Ile Ile Gly Gly Ile Asp His Ser Leu Tyr Thr Gly Ser Leu
210 215 220
Trp Tyr Thr Pro Ile Arg Arg Glu Trp Tyr Tyr Glu Val Ile Ile Val
225 230 235 240
Arg Val Glu Ile Asn Gly Gln Asp Leu Lys Met Asp Cys Lys Glu Tyr
245 250 255
Asn Tyr Asp Lys Ser Ile Val Asp Ser Gly Thr Thr Asn Leu Arg Leu
260 265 270
Pro Lys Lys Val Phe Glu Ala Ala Val Lys Ser Ile Lys Ala Ala Ser
275 280 285
Ser Thr Glu Lys Phe Pro Asp Gly Phe Trp Leu Gly Glu Gln Leu Val
290 295 300
Cys Trp Gln Ala Gly Thr Thr Pro Trp Asn Ile Phe Pro Val Ile Ser
305 310 315 320
Leu Tyr Leu Met Gly Glu Val Thr Asn Gln Ser Phe Arg Ile Thr Ile
325 330 335
Leu Pro Gln Gln Tyr Leu Arg Pro Val Glu Asp Val Ala Thr Ser Gln
340 345 350
Asp Asp Cys Tyr Lys Phe Ala Ile Ser Gln Ser Ser Thr Gly Thr Val
355 360 365
Met Gly Ala Val Ile Met Glu Gly Phe Tyr Val Val Phe Asp Arg Ala
370 375 380
Arg Lys Arg Ile Gly Phe Ala Val Ser Ala Cys His Val His Asp Glu
385 390 395 400
Phe Arg Thr Ala Ala Val Glu Gly Pro Phe Val Thr Leu Asp Met Glu
405 410 415
Asp Cys Gly Tyr Asn Ile Pro Gln Thr Asp Glu Ser
420 425

<210> 52
<211> 1305
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Hu-Asp2(b)
delta TM

<400> 52
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ggcaccacagc acggcatccg gctgcccctg cgcagcggcc tggggggcgc ccccttgggg 120
ctgcggctgc cccgggagac cgacgaagag ccgaggagag ccggccggag gggcagcttt 180
gtggagatgg tggacaacct gaggggcaag tgggggcagg gctactacgt ggagatgacc 240

UNITED STATES PATENT AND TRADEMARK OFFICE
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PATENT NO. : 6,790,610 B2
APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

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It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

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gtgggcagcc ccccgagac gctcaacatc ctggtggata caggcagcag taactttgca 300
gtgggtgctg cccccacccc ctctctgcat cgctactacc agaggcagct gtccagcaca 360
taccgggacc tccggaaggg tgtgtatgtg ccctacaccc agggcaagtg ggaaggggag 420
ctgggcaccg acotggtaag catccccat ggccccaacg tcactgtgcg tgccaacatt 480
gctgccatca ctgaatcaga caagttcttc atcaacggct ccaactggga aggcattcctg 540
gggctggcct atgctgagat tggcaggctt tgtgggtgctg gcttccccct caaccagtct 600
gaagtgtctg cctctgtcgg agggagcatg atcattggag gtatcgacca ctctgtgtac 660
acaggcagtc tctgggtatac acccatccgg cgggagtggg attatgaggt catcattgtg 720
cgggtggaga tcaatggaca ggatctgaaa atggactgca aggagtacaa ctatgacaag 780
agcattgtgg acagtggcac caccaacctt cgtttgccca agaaagtgtt tgaagctgca 840
gtcaaatcca tcaaggcagc ctccctccacg gagaagttcc ctgatgggtt ctggctagga 900
gagcagctgg tgtgctggga agcaggcacc accccttggg acattttccc agtcattctca 960
ctctacctaa tgggtgaggt taccaccag tccctccgca tcaccatcct tccgcagcaa 1020
tacctgctgg cagtgggaaga tgtggccacg tcccaagacg actgttacaa gtttgccatc 1080
tcacagtcac ccacggggcac tgttatggga gctgttatca tggagggtt ctacgttgtc 1140
tttgatcggg ccggaagacg aattggcttt gctgtcagcg cttgccatgt gcacgatgag 1200
ttcaggacgg cagcgggtgga aggccctttt gtcaccttgg acatggaaga ctgtggctac 1260
aacattccac agacagatga gtcacagcag cagcagcagc agtga 1305
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<210> 53

<211> 434

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Hu-Asp2(b)
delta TM

<400> 53

Met Ala Gln Ala Leu Pro Trp Leu Leu Leu Trp Met Gly Ala Gly Val
1 5 10 15

Leu Pro Ala His Gly Thr Gln His Gly Ile Arg Leu Pro Leu Arg Ser
20 25 30

Gly Leu Gly Gly Ala Pro Leu Gly Leu Arg Leu Pro Arg Glu Thr Asp
35 40 45

Glu Glu Pro Glu Glu Pro Gly Arg Arg Gly Ser Phe Val Glu Met Val
50 55 60

Asp Asn Leu Arg Gly Lys Ser Gly Gln Gly Tyr Tyr Val Glu Met Thr
65 70 75 80

Val Gly Ser Pro Pro Gln Thr Leu Asn Ile Leu Val Asp Thr Gly Ser
85 90 95

Ser Asn Phe Ala Val Gly Ala Ala Pro His Pro Phe Leu His Arg Tyr
100 105 110

Tyr Gln Arg Gln Leu Ser Ser Thr Tyr Arg Asp Leu Arg Lys Gly Val
115 120 125

Tyr Val Pro Tyr Thr Gln Gly Lys Trp Glu Gly Glu Leu Gly Thr Asp
130 135 140

Leu Val Ser Ile Pro His Gly Pro Asn Val Thr Val Arg Ala Asn Ile
145 150 155 160

Ala Ala Ile Thr Glu Ser Asp Lys Phe Phe Ile Asn Gly Ser Asn Trp
165 170 175

UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
 APPLICATION NO. : 09/869414
 DATED : September 14, 2004
 INVENTOR(S) : Mark E. Gurney et al.

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It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

```

Glu Gly Ile Leu Gly Leu Ala Tyr Ala Glu Ile Ala Arg Leu Cys Gly
    180                      185                      190

Ala Gly Phe Pro Leu Asn Gln Ser Glu Val Leu Ala Ser Val Gly Gly
    195                      200                      205

Ser Met Ile Ile Gly Gly Ile Asp His Ser Leu Tyr Thr Gly Ser Leu
    210                      215                      220

Trp Tyr Thr Pro Ile Arg Arg Glu Trp Tyr Tyr Glu Val Ile Ile Val
    225                      230                      235                      240

Arg Val Glu Ile Asn Gly Gln Asp Leu Lys Met Asp Cys Lys Glu Tyr
    245                      250                      255

Asn Tyr Asp Lys Ser Ile Val Asp Ser Gly Thr Thr Asn Leu Arg Leu
    260                      265                      270

Pro Lys Lys Val Phe Glu Ala Ala Val Lys Ser Ile Lys Ala Ala Ser
    275                      280                      285

Ser Thr Glu Lys Phe Pro Asp Gly Phe Trp Leu Gly Glu Gln Leu Val
    290                      295                      300

Cys Trp Gln Ala Gly Thr Thr Pro Trp Asn Ile Phe Pro Val Ile Ser
    305                      310                      315                      320

Leu Tyr Leu Met Gly Glu Val Thr Asn Gln Ser Phe Arg Ile Thr Ile
    325                      330                      335

Leu Pro Gln Gln Tyr Leu Arg Pro Val Glu Asp Val Ala Thr Ser Gln
    340                      345                      350

Asp Asp Cys Tyr Lys Phe Ala Ile Ser Gln Ser Ser Thr Gly Thr Val
    355                      360                      365

Met Gly Ala Val Ile Met Glu Gly Phe Tyr Val Val Phe Asp Arg Ala
    370                      375                      380

Arg Lys Arg Ile Gly Phe Ala Val Ser Ala Cys His Val His Asp Glu
    385                      390                      395                      400

Phe Arg Thr Ala Ala Val Glu Gly Pro Phe Val Thr Leu Asp Met Glu
    405                      410                      415

Asp Cys Gly Tyr Asn Ile Pro Gln Thr Asp Glu Ser His His His His
    420                      425                      430

His His
  
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<210> 54
 <211> 2310
 <212> DNA
 <213> Homo sapiens

<400> 54
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 ccactgatg gtaatgctgg cctgctggct gaacccacaga ttgccatgtt ctgtggcaga 120
 ctgaacatgc acatgaatgt ccagaatggg aagtgggatt cagatccatc agggacccaa 180

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 51 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

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acotgcattg ataccaagga aggcatectg cagtattgcc aagaagtcta cctgaactg 240
cagatcacca atgtggtaga agccaacca cagtgacca tccagaactg gtgcaagcgg 300
ggccgcaago agtgcaagac ccataccca tttgtgattc cctaccgctg cttagtgggt 360
gagttttaa gtgatccct tctogttcct gacaagtga aattcttaca ccaggagagg 420
atggatgtt gcgaaactca tctcactgg cacaccgctg ccaagagagac atgcagttag 480
aagagtaaca acttgcatga ctacggcatg ttgctgcoct gcggaattga caagttooga 540
ggggtagagt ttgtgtgttg cccactggct gaagaaagtg acaatgtgga ttctgctgat 600
ggcgaggagg atgactcgga tgtctgggtg ggcgagcag acacagacta tgcagatggg 660
agtgaagaca aagtagtaga agtagcagag gaggaagaag tggctgaggt ggaagaagaa 720
gaagccgatg atgacgagga cagtaggagt ggtgatgagg tagaggaaga ggtgaggaa 780
coctaogaa aagccacaga gagaaccacc agcattgccca ccaccaccac caccaccaca 840
gagtcctggt aagaggtggt tccagaggtg tgctctgaac aagccgagac ggggcccgtg 900
cgagcaatga tctcccgtg gtactctgat gtgactgaag ggaagtgtgc cccattcttt 960
tacggcggat gtggcggcaa ccggaacaac tttgacacag aagagtactg catggccgtg 1020
tgtggcaggg ccagtgtcca aagtttactc aagactacc cgaacacctt tggcogagat 1080
cctgttaaac ttcttacaac agcagccagt acccctgatg ccgttgacaa gtatctcgag 1140
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aagaacttgc cttaaagctga taagaaggca gttatccagc atttccagga gaaagtggaa 1320
tctttggaac aggaagcagc caacgagaga cagcagctgg tggagacaca catggccaga 1380
gtggaagcca tgcctaatga ccgcgcgcgc ctggccctgg agaactacat caccgctctg 1440
caggctgttc ctccctgggc tgcctacgtg ttcaatatgc taaagaagta tgtccgcgca 1500
gaacagaagg acagaagca caccctaaag catctcgagc atgtgcgcat ggtggatccc 1560
aagaagccg ctcagatccg gtccaggtt atgacacacc tccgtgtgat ttatgagcgc 1620
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gaagttgatg agotgcttca gaaagagcaa aactattcag atgacgtctt ggccaacatg 1740
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aaaaccacgg tggagctcct tcccgatgaat ggagagttca gcctggagca tctccagccg 1860
tggcattott ttgggggtga ctctgtgcca gccaacacag aaaacgaagt tgagcctgtt 1920
gatgcccggc ctgctgcgga ccgaggactg accactgcag caggttcttg gttgacaaat 1980
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gcaatcattg gactcatggt gggcggtgtt gtcatagcga cagtgatcgt catcaccttg 2160
gtgatgctga agaagaaca gtacacatcc attcatcatg gtgtggtgga ggttgacgcc 2220
gotgtcacc cagaggagcg ccacctgtcc aagatgcagc agaacggcta cgaaaatcca 2280
acctacaagt tctttgagca gatgcagaac 2310
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<210> 55
<211> 770
<212> PRT
<213> Homo sapiens

<400> 55
Met Leu Pro Gly Leu Ala Leu Leu Leu Ala Ala Trp Thr Ala Arg
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20 25 30
Gln Ile Ala Met Phe Cys Gly Arg Leu Asn Met His Met Asn Val Gln
35 40 45
Asn Gly Lys Trp Asp Ser Asp Pro Ser Gly Thr Lys Thr Cys Ile Asp
50 55 60
Thr Lys Glu Gly Ile Leu Gln Tyr Cys Gln Glu Val Tyr Pro Glu Leu
65 70 75 80
Gln Ile Thr Asn Val Val Glu Ala Asn Gln Pro Val Thr Ile Gln Asn
85 90 95
Trp Cys Lys Arg Gly Arg Lys Gln Cys Lys Thr His Pro His Phe Val
100 105 110

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 52 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Ile Pro Tyr Arg Cys Leu Val Gly Glu Phe Val Ser Asp Ala Leu Leu
115 120 125
Val Pro Asp Lys Cys Lys Phe Leu His Gln Glu Arg Met Asp Val Cys
130 135 140
Glu Thr His Leu His Trp His Thr Val Ala Lys Glu Thr Cys Ser Glu
145 150 155 160
Lys Ser Thr Asn Leu His Asp Tyr Gly Met Leu Leu Pro Cys Gly Ile
165 170 175
Asp Lys Phe Arg Gly Val Glu Phe Val Cys Cys Pro Leu Ala Glu Glu
180 185 190
Ser Asp Asn Val Asp Ser Ala Asp Ala Glu Glu Asp Asp Ser Asp Val
195 200 205
Trp Trp Gly Gly Ala Asp Thr Asp Tyr Ala Asp Gly Ser Glu Asp Lys
210 215 220
Val Val Glu Val Ala Glu Glu Glu Glu Val Ala Glu Val Glu Glu Glu
225 230 235 240
Glu Ala Asp Asp Asp Glu Asp Asp Glu Asp Gly Asp Glu Val Glu Glu
245 250 255
Glu Ala Glu Glu Pro Tyr Glu Glu Ala Thr Glu Arg Thr Thr Ser Ile
260 265 270
Ala Thr Thr Thr Thr Thr Thr Thr Glu Ser Val Glu Glu Val Val Arg
275 280 285
Glu Val Cys Ser Glu Gln Ala Glu Thr Gly Pro Cys Arg Ala Met Ile
290 295 300
Ser Arg Trp Tyr Phe Asp Val Thr Glu Gly Lys Cys Ala Pro Phe Phe
305 310 315 320
Tyr Gly Gly Cys Gly Gly Asn Arg Asn Asn Phe Asp Thr Glu Glu Tyr
325 330 335
Cys Met Ala Val Cys Gly Ser Ala Met Ser Gln Ser Leu Leu Lys Thr
340 345 350
Thr Gln Glu Pro Leu Ala Arg Asp Pro Val Lys Leu Pro Thr Thr Ala
355 360 365
Ala Ser Thr Pro Asp Ala Val Asp Lys Tyr Leu Glu Thr Pro Gly Asp
370 375 380
Glu Asn Glu His Ala His Phe Gln Lys Ala Lys Glu Arg Leu Glu Ala
385 390 395 400
Lys His Arg Glu Arg Met Ser Gln Val Met Arg Glu Trp Glu Glu Ala
405 410 415
Glu Arg Gln Ala Lys Asn Leu Pro Lys Ala Asp Lys Lys Ala Val Ile
420 425 430
Gln His Phe Gln Glu Lys Val Glu Ser Leu Glu Gln Glu Ala Ala Asn
435 440 445

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

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It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Glu Arg Gln Gln Leu Val Glu Thr His Met Ala Arg Val Glu Ala Met
450 455 460
Leu Asn Asp Arg Arg Arg Leu Ala Leu Glu Asn Tyr Ile Thr Ala Leu
465 470 475 480
Gln Ala Val Pro Pro Arg Pro Arg His Val Phe Asn Met Leu Lys Lys
485 490 495
Tyr Val Arg Ala Glu Gln Lys Asp Arg Gln His Thr Leu Lys His Phe
500 505 510
Glu His Val Arg Met Val Asp Pro Lys Lys Ala Ala Gln Ile Arg Ser
515 520 525
Gln Val Met Thr His Leu Arg Val Ile Tyr Glu Arg Met Asn Gln Ser
530 535 540
Leu Ser Leu Leu Tyr Asn Val Pro Ala Val Ala Glu Glu Ile Gln Asp
545 550 555 560
Glu Val Asp Glu Leu Leu Gln Lys Glu Gln Asn Tyr Ser Asp Asp Val
565 570 575
Leu Ala Asn Met Ile Ser Glu Pro Arg Ile Ser Tyr Gly Asn Asp Ala
580 585 590
Leu Met Pro Ser Leu Thr Glu Thr Lys Thr Thr Val Glu Leu Leu Pro
595 600 605
Val Asn Gly Glu Phe Ser Leu Asp Asp Leu Gln Pro Trp His Ser Phe
610 615 620
Gly Ala Asp Ser Val Pro Ala Asn Thr Glu Asn Glu Val Glu Pro Val
625 630 635 640
Asp Ala Arg Pro Ala Ala Asp Arg Gly Leu Thr Thr Arg Pro Gly Ser
645 650 655
Gly Leu Thr Asn Ile Lys Thr Glu Glu Ile Ser Glu Val Lys Met Asp
660 665 670
Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val His His Gln Lys Leu
675 680 685
Val Phe Phe Ala Glu Asp Val Gly Ser Asn Lys Gly Ala Ile Ile Gly
690 695 700
Leu Met Val Gly Gly Val Val Ile Ala Thr Val Ile Val Ile Thr Leu
705 710 715 720
Val Met Leu Lys Lys Lys Gln Tyr Thr Ser Ile His His Gly Val Val
725 730 735
Glu Val Asp Ala Ala Val Thr Pro Glu Glu Arg His Leu Ser Lys Met
740 745 750
Gln Gln Asn Gly Tyr Glu Asn Pro Thr Tyr Lys Phe Phe Glu Gln Met
755 760 765
Gln Asn
770

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 54 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

<210> 56
<211> 2253
<212> DNA
<213> Homo sapiens

<400> 56
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ctgaacatgc acatgaatgt ccagaatggg aagtgggatt cagatccatc agggaccaaa 180
acctgcattg ataccaagga aggcattctg cagtattgcc aagaagtcta cctgaaactg 240
cagatcacca atgtggtaga agccaaccaa ccagtgacca tccagaactg gtgcaagcgg 300
ggcgcgaagc agtgcaagac ccacccccac tttgtgattc cctaccgctg cttagtgggt 360
gagtttgtaa gtgatgccct tctcgttcct gacaagtga aattcttaca ccaggagagg 420
atggatgttt gcgaaactca tcttcactgg cacaccgtcg ccaaagagac atgcagttag 480
aagagtacca acttgcattg ctacggcatg ttgctgcctt gcggaattga caagtccga 540
ggggttagagt ttgtgtgttg cccactggct gaagaaagtg acaatgtgga ttctgctgat 600
gctggaggagg atgactcggg tgtctgggtg ggcggagcag acacagacta tgcagatggg 660
agtgaagaca aagtagtaga agtagcagag gaggaagaag tggctgaggt ggaagaagaa 720
gaagccgatg atgacgaggc cagtagggat ggtgatgagg tagaggaaga ggotgaggaa 780
ccctacgaag aagccacaga gagaaccacc agcattgcca ccaccaccac caccaccaca 840
gagtcctgtg aagaggtggt tcgagaggtg tgctctgaac aagccgagac ggggcccgtg 900
cgagcaatga tctcccgtg gtactttgat gtgactgaag ggaagtgtgc cccattctt 960
tacggcggat gtggcggcaa ccggaacaac tttgacacag aagagtactg catggccgtg 1020
tgtggcagcg ccattcctac aacagcagcc agtaccctg atgcccgttga caagtatctc 1080
gagacacctg gggatgagaa tgaacatgcc catttccaga aagccaaaga gaggcttgag 1140
gccaagcacc gagagagaat gtcccaggtc atgagagaat ggggaagaggc agaactcaa 1200
gcaaagaact tgccataaagc tgataagaag gcagttatcc agcatttcca ggagaaagtg 1260
gaatctttgg aacaggaagc agccaacgag agacagcagc tgggtggagac acacatggcc 1320
agagtggagc ccatgctcaa tgaccgccc cgcctggccc tggagaacta catcacgct 1380
ctgcaggctg ttctcctcgc gcctcgtcac gtgttcaata tgctaagaa gtatgtccgc 1440
gcagaacaga aggacagaca gcacacccta aagcatttcc agcatgtgcg catggtggat 1500
cccaagaagc ccgctcagat ccggtcccag gttatgacac acctccgtgt gatttatgag 1560
cgcatgaatc agtctctctc cctgctctac aacgtgcctg cagtggccga ggagattcag 1620
gatgaagttg atgagctgct tcagaaagag caaaactatt cagatgacgt cttggccaac 1680
atgattagtg aaccaaggat cagtacgga aacgatgctc tcatgccatc tttgaccgaa 1740
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ccgtggcatt ctttggggc tgactctgtg ccagccaaca cagaaaacga agttgagcct 1860
gttgatgccc gccctgctgc cgaccgagga ctgaccactc gaccagggtc tgggttgaca 1920
aatatcaaga cggaggagat ctctgaagtg aagatggatg cagaattccg acatgactca 1980
ggatatgaag ttcacatca aaaattggtg ttctttgcag aagatgtggg ttcaaacaaa 2040
ggtgcaatca ttggactcat ggtggcggt gttgtcatag cgacagtgat cgtcatcacc 2100
ttggtgatgc tgaagaagaa acagtacaca tccattcatc atggtgtggt ggaggttgac 2160
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<210> 57
<211> 751
<212> PRT
<213> Homo sapiens

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1 5 10 15
Ala Leu Glu Val Pro Thr Asp Gly Asn Ala Gly Leu Leu Ala Glu Pro
20 25 30
Gln Ile Ala Met Phe Cys Gly Arg Leu Asn Met His Met Asn Val Gln
35 40 45

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
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DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 55 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Asn Gly Lys Trp Asp Ser Asp Pro Ser Gly Thr Lys Thr Cys Ile Asp
50 55 60
Thr Lys Glu Gly Ile Leu Gln Tyr Cys Gln Glu Val Tyr Pro Glu Leu
65 70 75 80
Gln Ile Thr Asn Val Val Glu Ala Asn Gln Pro Val Thr Ile Gln Asn
85 90 95
Trp Cys Lys Arg Gly Arg Lys Gln Cys Lys Thr His Pro His Phe Val
100 105 110
Ile Pro Tyr Arg Cys Leu Val Gly Glu Phe Val Ser Asp Ala Leu Leu
115 120 125
Val Pro Asp Lys Cys Lys Phe Leu His Gln Glu Arg Met Asp Val Cys
130 135 140
Glu Thr His Leu His Trp His Thr Val Ala Lys Glu Thr Cys Ser Glu
145 150 155 160
Lys Ser Thr Asn Leu His Asp Tyr Gly Met Leu Leu Pro Cys Gly Ile
165 170 175
Asp Lys Phe Arg Gly Val Glu Phe Val Cys Cys Pro Leu Ala Glu Glu
180 185 190
Ser Asp Asn Val Asp Ser Ala Asp Ala Glu Glu Asp Asp Ser Asp Val
195 200 205
Trp Trp Gly Gly Ala Asp Thr Asp Tyr Ala Asp Gly Ser Glu Asp Lys
210 215 220
Val Val Glu Val Ala Glu Glu Glu Glu Val Ala Glu Val Glu Glu Glu
225 230 235 240
Glu Ala Asp Asp Asp Glu Asp Asp Glu Asp Gly Asp Glu Val Glu Glu
245 250 255
Glu Ala Glu Glu Pro Tyr Glu Glu Ala Thr Glu Arg Thr Thr Ser Ile
260 265 270
Ala Thr Thr Thr Thr Thr Thr Thr Glu Ser Val Glu Glu Val Val Arg
275 280 285
Glu Val Cys Ser Glu Gln Ala Glu Thr Gly Pro Cys Arg Ala Met Ile
290 295 300
Ser Arg Trp Tyr Phe Asp Val Thr Glu Gly Lys Cys Ala Pro Phe Phe
305 310 315 320
Tyr Gly Gly Cys Gly Gly Asn Arg Asn Asn Phe Asp Thr Glu Glu Tyr
325 330 335
Cys Met Ala Val Cys Gly Ser Ala Ile Pro Thr Thr Ala Ala Ser Thr
340 345 350
Pro Asp Ala Val Asp Lys Tyr Leu Glu Thr Pro Gly Asp Glu Asn Glu
355 360 365
His Ala His Phe Gln Lys Ala Lys Glu Arg Leu Glu Ala Lys His Arg
370 375 380

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DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 56 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Glu Arg Met Ser Gln Val Met Arg Glu Trp Glu Glu Ala Glu Arg Gln
385 390 395 400
Ala Lys Asn Leu Pro Lys Ala Asp Lys Lys Ala Val Ile Gln His Phe
405 410 415
Gln Glu Lys Val Glu Ser Leu Glu Gln Glu Ala Ala Asn Glu Arg Gln
420 425 430
Gln Leu Val Glu Thr His Met Ala Arg Val Glu Ala Met Leu Asn Asp
435 440 445
Arg Arg Arg Leu Ala Leu Glu Asn Tyr Ile Thr Ala Leu Gln Ala Val
450 455 460
Pro Pro Arg Pro Arg His Val Phe Asn Met Leu Lys Lys Tyr Val Arg
465 470 475 480
Ala Glu Gln Lys Asp Arg Gln His Thr Leu Lys His Phe Glu His Val
485 490 495
Arg Met Val Asp Pro Lys Lys Ala Ala Gln Ile Arg Ser Gln Val Met
500 505 510
Thr His Leu Arg Val Ile Tyr Glu Arg Met Asn Gln Ser Leu Ser Leu
515 520 525
Leu Tyr Asn Val Pro Ala Val Ala Glu Glu Ile Gln Asp Glu Val Asp
530 535 540
Glu Leu Leu Gln Lys Glu Gln Asn Tyr Ser Asp Asp Val Leu Ala Asn
545 550 555 560
Met Ile Ser Glu Pro Arg Ile Ser Tyr Gly Asn Asp Ala Leu Met Pro
565 570 575
Ser Leu Thr Glu Thr Lys Thr Thr Val Glu Leu Leu Pro Val Asn Gly
580 585 590
Glu Phe Ser Leu Asp Asp Leu Gln Pro Trp His Ser Phe Gly Ala Asp
595 600 605
Ser Val Pro Ala Asn Thr Glu Asn Glu Val Glu Pro Val Asp Ala Arg
610 615 620
Pro Ala Ala Asp Arg Gly Leu Thr Thr Arg Pro Gly Ser Gly Leu Thr
625 630 635 640
Asn Ile Lys Thr Glu Glu Ile Ser Glu Val Lys Met Asp Ala Glu Phe
645 650 655
Arg His Asp Ser Gly Tyr Glu Val His His Gln Lys Leu Val Phe Phe
660 665 670
Ala Glu Asp Val Gly Ser Asn Lys Gly Ala Ile Ile Gly Leu Met Val
675 680 685
Gly Gly Val Val Ile Ala Thr Val Ile Val Ile Thr Leu Val Met Leu
690 695 700
Lys Lys Lys Gln Tyr Thr Ser Ile His His Gly Val Val Glu Val Asp
705 710 715 720

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Page 57 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Ala. Ala Val Thr Pro Glu Glu Arg His Leu Ser Lys Met Gln Gln Asn
725 730 735

Gly Tyr Glu Asn Pro Thr Tyr Lys Phe Phe Glu Gln Met Gln Asn
740 745 750

<210> 58
<211> 2316
<212> DNA
<213> Homo sapiens

<400> 58
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ctgaacatgc acatgaatgt ccagaatggg aagtgggatt cagatccatc agggacccaaa 180
acctgcattg ataccaagga aggcattctg cagtattgcc aagaagtcta cctgaactg 240
cagatcacca atgtggtaga agccaaccaa ccagtgaaca tccagaactg gtgcaagcgg 300
ggcgcgaagc agtgcaagac ccacccccc tttgtgattc cctaccgctg cttagttagt 360
gagtttgtaa gtgatgccct tctcgttccg gacaagtga aattcttaca ccaggagagg 420
atggatgttt gcgaaactca tcttcactgg cacaccgtcg ccaaagagac atgcagtgg 480
aagagtacca acttgcatga ctacggcatg ttgctgccct gcggaattga caagtccga 540
ggggtagagt ttgtgtgtg cccactgggt gaagaagtg acaatgtgga ttctgctgat 600
gcggaggagg atgactcga tgtctggtgg ggcggagcag acacagacta tgcagatggg 660
agtgaagaca aagttagtag agtagcagag gaggaaagag tggctgagggt ggaagaagaa 720
gaagccgatg atgacgagga cgtatgaggat ggtgatgagg tagaggaaaga ggctgaggaa 780
cctacagaa gacgacaga gagaaccacc agcattgcca ccaccaccac caccaccaca 840
gagtcctgtg aagaggtgtg tggagaggtg tgctctgaac aagccgagac ggggcccgtg 900
cgagcaatga tctcccgctg gtactttgat gtgactgaag ggaagtgtgc cccattctt 960
tacggcggtg gtggcggaac ccggaacaac tttgacacag aagagtactg catggcogtg 1020
tgtggcagcg ccattgtcca aagtttactc aagactacco aggaacctct tggccgagat 1080
cctgttaaac tctctacaac agcagccagt acccctgatg ccgttgacaa gtatctogag 1140
acacctgggg atgagaatga acatgcccat ttccagaaag ccaaagagag gcttgaggcc 1200
aagcaccgag agagaatgtc coaggatcag agagaatggg aagaggcaga acgtcaagca 1260
aagaacttgc ctaagctga taagaaggca gttatccagc atttccagga gaaagtggaa 1320
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gtggaagcoa tgcctaata cgcgcgcgcg ctggccctgg agaactacat caccgctctg 1440
caggctgttc ctccctgggt tgcacagtg ttcaatatgc taaagaagta tgtccgcgca 1500
gaacagaaag acagacagca caccctaaag catttcgagc atgtgcgcat ggtggatccc 1560
aagaagccg ctcagatccg gtcccagggt atgacacacc tccgtgtgat ttatgagcgc 1620
atgaatcagt ctctctccct gctctacaac gtgcctgcag tggccgagga gattcaggat 1680
gaagttgatg agctgcttca gaaagagcaa aactattcag atgacgtctt ggccaacatg 1740
attagtgaac caaggatcag ttacggaaac gatgctctca tgccatctt gaccgaaaag 1800
aaaaccaccg tggagctcct tccgtgaat ggagagttca gcctggaaga tctocagccg 1860
tggcattott ttgggctga ctctgtgca gccaacacag aaaacgaagt tgagcctgtt 1920
gatgcccgcc ctgctgcga cogaggactg accactcgac caggttctgg gttgacaaat 1980
atcaagacgg aggatgtct tgaagtgaag atggatgcag aattccgaca tgactcagga 2040
tatgaagttc atcatcaaaa attggtgttc tttgcagaag atgtgggttc aaacaaagg 2100
gcaatcattg gactcatggt gggcggtgtt gtcatagcga cagtgtatgt catoccttg 2160
gtgatgtga agaagaaaca gtacacatoc attcatcatg gtgtggtgga gggtgaogcc 2220
gctgtcacc cagaggagcg ccacctgtcc aagatgcagc agaacggcta cgaanaatcca 2280
acctacaagt tctttgagca gatgcagaac aagaag 2316

<210> 59
<211> 772
<212> PRT
<213> Homo sapiens

<400> 59
Met Leu Pro Gly Leu Ala Leu Leu Leu Leu Ala Ala Trp Thr Ala Arg
1 5 10 15

Ala Leu Glu Val Pro Thr Asp Gly Asn Ala Gly Leu Leu Ala Glu Pro

UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
 APPLICATION NO. : 09/869414
 DATED : September 14, 2004
 INVENTOR(S) : Mark E. Gurney et al.

Page 58 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

20	25	30
Gln Ile Ala Met Phe Cys Gly Arg Leu Asn Met His Met Asn Val Gln 35 40 45		
Asn Gly Lys Trp Asp Ser Asp Pro Ser Gly Thr Lys Thr Cys Ile Asp 50 55 60		
Thr Lys Glu Gly Ile Leu Gln Tyr Cys Gln Glu Val Tyr Pro Glu Leu 65 70 75 80		
Gln Ile Thr Asn Val Val Glu Ala Asn Gln Pro Val Thr Ile Gln Asn 85 90 95		
Trp Cys Lys Arg Gly Arg Lys Gln Cys Lys Thr His Pro His Phe Val 100 105 110		
Ile Pro Tyr Arg Cys Leu Val Gly Glu Phe Val Ser Asp Ala Leu Leu 115 120 125		
Val Pro Asp Lys Cys Lys Phe Leu His Gln Glu Arg Met Asp Val Cys 130 135 140		
Glu Thr His Leu His Trp His Thr Val Ala Lys Glu Thr Cys Ser Glu 145 150 155 160		
Lys Ser Thr Asn Leu His Asp Tyr Gly Met Leu Leu Pro Cys Gly Ile 165 170 175		
Asp Lys Phe Arg Gly Val Glu Phe Val Cys Cys Pro Leu Ala Glu Glu 180 185 190		
Ser Asp Asn Val Asp Ser Ala Asp Ala Glu Glu Asp Asp Ser Asp Val 195 200 205		
Trp Trp Gly Gly Ala Asp Thr Asp Tyr Ala Asp Gly Ser Glu Asp Lys 210 215 220		
Val Val Glu Val Ala Glu Glu Glu Glu Val Ala Glu Val Glu Glu Glu 225 230 235 240		
Glu Ala Asp Asp Asp Glu Asp Asp Glu Asp Gly Asp Glu Val Glu Glu 245 250 255		
Glu Ala Glu Glu Pro Tyr Glu Glu Ala Thr Glu Arg Thr Thr Ser Ile 260 265 270		
Ala Thr Thr Thr Thr Thr Thr Thr Glu Ser Val Glu Glu Val Val Arg 275 280 285		
Glu Val Cys Ser Glu Gln Ala Glu Thr Gly Pro Cys Arg Ala Met Ile 290 295 300		
Ser Arg Trp Tyr Phe Asp Val Thr Glu Gly Lys Cys Ala Pro Phe Phe 305 310 315 320		
Tyr Gly Gly Cys Gly Gly Asn Arg Asn Asn Phe Asp Thr Glu Glu Tyr 325 330 335		
Cys Met Ala Val Cys Gly Ser Ala Met Ser Gln Ser Leu Leu Lys Thr 340 345 350		

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INVENTOR(S) : Mark E. Gurney et al.

Page 59 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Thr Gln Glu Pro Leu Ala Arg Asp Pro Val Lys Leu Pro Thr Thr Ala
355 360 365
Ala Ser Thr Pro Asp Ala Val Asp Lys Tyr Leu Glu Thr Pro Gly Asp
370 375 380
Glu Asn Glu His Ala His Phe Gln Lys Ala Lys Glu Arg Leu Glu Ala
385 390 395 400
Lys His Arg Glu Arg Met Ser Gln Val Met Arg Glu Trp Glu Glu Ala
405 410 415
Glu Arg Gln Ala Lys Asn Leu Pro Lys Ala Asp Lys Lys Ala Val Ile
420 425 430
Gln His Phe Gln Glu Lys Val Glu Ser Leu Glu Gln Glu Ala Ala Asn
435 440 445
Glu Arg Gln Gln Leu Val Glu Thr His Met Ala Arg Val Glu Ala Met
450 455 460
Leu Asn Asp Arg Arg Arg Leu Ala Leu Glu Asn Tyr Ile Thr Ala Leu
465 470 475 480
Gln Ala Val Pro Pro Arg Pro Arg His Val Phe Asn Met Leu Lys Lys
485 490 495
Tyr Val Arg Ala Glu Gln Lys Asp Arg Gln His Thr Leu Lys His Phe
500 505 510
Glu His Val Arg Met Val Asp Pro Lys Lys Ala Ala Gln Ile Arg Ser
515 520 525
Gln Val Met Thr His Leu Arg Val Ile Tyr Glu Arg Met Asn Gln Ser
530 535 540
Leu Ser Leu Leu Tyr Asn Val Pro Ala Val Ala Glu Glu Ile Gln Asp
545 550 555 560
Glu Val Asp Glu Leu Leu Gln Lys Glu Gln Asn Tyr Ser Asp Asp Val
565 570 575
Leu Ala Asn Met Ile Ser Glu Pro Arg Ile Ser Tyr Gly Asn Asp Ala
580 585 590
Leu Met Pro Ser Leu Thr Glu Thr Lys Thr Thr Val Glu Leu Leu Pro
595 600 605
Val Asn Gly Glu Phe Ser Leu Asp Asp Leu Gln Pro Trp His Ser Phe
610 615 620
Gly Ala Asp Ser Val Pro Ala Asn Thr Glu Asn Glu Val Glu Pro Val
625 630 635 640
Asp Ala Arg Pro Ala Ala Asp Arg Gly Leu Thr Thr Arg Pro Gly Ser
645 650 655
Gly Leu Thr Asn Ile Lys Thr Glu Glu Ile Ser Glu Val Lys Met Asp
660 665 670
Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val His His Gln Lys Leu
675 680 685

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DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 60 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Val Phe Phe Ala Glu Asp Val Gly Ser Asn Lys Gly Ala Ile Ile Gly
690 695 700

Leu Met Val Gly Gly Val Val Ile Ala Thr Val Ile Val Ile Thr Leu
705 710 715 720

Val Met Leu Lys Lys Lys Gln Tyr Thr Ser Ile His His Gly Val Val
725 730 735

Glu Val Asp Ala Ala Val Thr Pro Glu Glu Arg His Leu Ser Lys Met
740 745 750

Gln Gln Asn Gly Tyr Glu Asn Pro Thr Tyr Lys Phe Phe Glu Gln Met
755 760 765

Gln Asn Lys Lys
770

<210> 60
<211> 2259
<212> DNA
<213> Homo sapiens

<400> 60
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ctgaacatgc acatgaatgt ccagaatggg aagtgggatt cagatccatc agggaccaaa 180
acctgcattg ataccaagga aggcattcctg cagtattgco aagaagtcta ccctgaactg 240
cagatcacca atgtggtaga agccaaccaa ccagtgcaca tccagaactg gtgcaggogg 300
ggccgcaagc agtgcaagac ccataccccc tttgtgattc cctaccgctg cttagttggg 360
gagtttgtaa gtgatgcctt tctcgttctt gacaagtga aattcttaca ccaggagagg 420
atggatgttt gogaaaotca tcttactgg caccacgtcg ocaaagagac atgcagtggg 480
aagagtacca acttgcatga ctacggcatg ttgctgccc ttggaattga caagttccga 540
ggggtagagt ttgtgtgttg cccactggct gaagaaagtg acaatgtgga ttctgctgat 600
gocggaggagg atgactcgga tgtctggtgg ggccggagcag acacagacta tgcagatggg 660
agtgaagaca aagttagtag agtagcagag gaggaaagag tggctgaggt ggaagaagaa 720
gaagccgatg atgacgagga cgatgaggat ggtgatgagg tagaggaaag ggctgaggaa 780
ccctacgaag aagccacaga gagaaccacc agcattgcca ccaccaccac caccaccaca 840
gagtcctgtg aagaggtggg tccagagggt tgctctgaac aagccgagac ggggcccgtg 900
cgagcaatga tctcccgcctg gtaacttggat gtgactgaag ggaagtgtgc cccattcttt 960
tacggcggat gtggcgccaa ccggaacaac tttgaacag aagagtactg catggccgtg 1020
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gagacacctg gggatgagaa tgaacatgcc catttccaga aagccaaaga gaggcttgag 1140
gccaaagcacc gagagagaat gtcccaggto atgagagaat gggaaagagg agaactcaa 1200
gaaaagaact tgccataaagc tgataaagag gcagttatcc agcatttcca ggagaaagtg 1260
gaatctttgg aacaggaagc agccaacgag agacagcagc tggtagagac acacatggcc 1320
agagtggagg ccatgctcaa tgacgcgcgc cgcctggccc tggagaacta catcacogct 1380
ctgcaggctg ttccctcctcg gcctcgtcac gtgttcaata tgctaaagaa gtatgtccgc 1440
gcagaacaga aggaacagca gcacacccta aagcatttgc agcatgtgcg catggtggat 1500
cccaagaaga cogctcagat cgggtcccag gttatgacac acctccgtgt gatttatgag 1560
ogcatgaatc agtctctctc cctcgtctac aacgtgcctg cagtggcoga ggagattcag 1620
gatgaagttg atgagctgct tcagaaagag caaaactatt cagatgacgt cttggccaa 1680
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ccgtggcatt cttttggggg tgactctgtg ccagccaaca cagaaaacga agttgagoc 1860
gttgatgccc gccctgctgc cgaccgagga ctgaccactc gaccaggttc tgggttgaca 1920
aatatcaaga cggagggagat otctgaagtg aagatggagt cagaattccg acatgactca 1980
ggatataaag ttcatcatca aaaattgggt ttctttgcag aagatgtggg ttcaaacaaa 2040
ggctgaatca ttggactcat ggtggggcgt gtgtgcatag cgacagtgat cgtcatcacc 2100
ttggtgatgc tgaagaagaa acagtacaca tccattcacc atggtgtggt ggaggttgac 2160

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PATENT NO. : 6,790,610 B2
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DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 61 of 66

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gcegtgtca cccagagga ggcacacgtg tccaagatgc agcagaacgg ctacgaaat 2220
ccaacctaca agttctttga gcagatgcag aacaagaag 2259

<210> 61
<211> 753
<212> PRT
<213> Homo sapiens

<400> 61
Met Leu Pro Gly Leu Ala Leu Leu Leu Ala Ala Trp Thr Ala Arg
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Ala Leu Glu Val Pro Thr Asp Gly Asn Ala Gly Leu Leu Ala Glu Pro
20 25 30
Gln Ile Ala Met Phe Cys Gly Arg Leu Asn Met His Met Asn Val Gln
35 40 45
Asn Gly Lys Trp Asp Ser Asp Pro Ser Gly Thr Lys Thr Cys Ile Asp
50 55 60
Thr Lys Glu Gly Ile Leu Gln Tyr Cys Gln Glu Val Tyr Pro Glu Leu
65 70 75 80
Gln Ile Thr Asn Val Val Glu Ala Asn Gln Pro Val Thr Ile Gln Asn
85 90 95
Trp Cys Lys Arg Gly Arg Lys Gln Cys Lys Thr His Pro His Phe Val
100 105 110
Ile Pro Tyr Arg Cys Leu Val Gly Glu Phe Val Ser Asp Ala Leu Leu
115 120 125
Val Pro Asp Lys Cys Lys Phe Leu His Gln Glu Arg Met Asp Val Cys
130 135 140
Glu Thr His Leu His Trp His Thr Val Ala Lys Glu Thr Cys Ser Glu
145 150 155 160
Lys Ser Thr Asn Leu His Asp Tyr Gly Met Leu Leu Pro Cys Gly Ile
165 170 175
Asp Lys Phe Arg Gly Val Glu Phe Val Cys Cys Pro Leu Ala Glu Glu
180 185 190
Ser Asp Asn Val Asp Ser Ala Asp Ala Glu Glu Asp Asp Ser Asp Val
195 200 205
Trp Trp Gly Gly Ala Asp Thr Asp Tyr Ala Asp Gly Ser Glu Asp Lys
210 215 220
Val Val Glu Val Ala Glu Glu Glu Glu Val Ala Glu Val Glu Glu Glu
225 230 235 240
Glu Ala Asp Asp Asp Glu Asp Asp Glu Asp Gly Asp Glu Val Glu Glu
245 250 255
Glu Ala Glu Glu Pro Tyr Glu Glu Ala Thr Glu Arg Thr Thr Ser Ile
260 265 270
Ala Thr Thr Thr Thr Thr Thr Thr Glu Ser Val Glu Glu Val Val Arg
275 280 285

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,790,610 B2
APPLICATION NO. : 09/869414
DATED : September 14, 2004
INVENTOR(S) : Mark E. Gurney et al.

Page 62 of 66

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Glu Val Cys Ser Glu Gln Ala Glu Thr Gly Pro Cys Arg Ala Met Ile
290 295 300
Ser Arg Trp Tyr Phe Asp Val Thr Glu Gly Lys Cys Ala Pro Phe Phe
305 310 315 320
Tyr Gly Gly Cys Gly Gly Asn Arg Asn Asn Phe Asp Thr Glu Glu Tyr
325 330 335
Cys Met Ala Val Cys Gly Ser Ala Ile Pro Thr Thr Ala Ala Ser Thr
340 345 350
Pro Asp Ala Val Asp Lys Tyr Leu Glu Thr Pro Gly Asp Glu Asn Glu
355 360 365
His Ala His Phe Gln Lys Ala Lys Glu Arg Leu Glu Ala Lys His Arg
370 375 380
Glu Arg Met Ser Gln Val Met Arg Glu Trp Glu Glu Ala Glu Arg Gln
385 390 395 400
Ala Lys Asn Leu Pro Lys Ala Asp Lys Lys Ala Val Ile Gln His Phe
405 410 415
Gln Glu Lys Val Glu Ser Leu Glu Gln Glu Ala Ala Asn Glu Arg Gln
420 425 430
Gln Leu Val Glu Thr His Met Ala Arg Val Glu Ala Met Leu Asn Asp
435 440 445
Arg Arg Arg Leu Ala Leu Glu Asn Tyr Ile Thr Ala Leu Gln Ala Val
450 455 460
Pro Pro Arg Pro Arg His Val Phe Asn Met Leu Lys Lys Tyr Val Arg
465 470 475 480
Ala Glu Gln Lys Asp Arg Gln His Thr Leu Lys His Phe Glu His Val
485 490 495
Arg Met Val Asp Pro Lys Lys Ala Ala Gln Ile Arg Ser Gln Val Met
500 505 510
Thr His Leu Arg Val Ile Tyr Glu Arg Met Asn Gln Ser Leu Ser Leu
515 520 525
Leu Tyr Asn Val Pro Ala Val Ala Glu Glu Ile Gln Asp Glu Val Asp
530 535 540
Glu Leu Leu Gln Lys Glu Gln Asn Tyr Ser Asp Asp Val Leu Ala Asn
545 550 555 560
Met Ile Ser Glu Pro Arg Ile Ser Tyr Gly Asn Asp Ala Leu Met Pro
565 570 575
Ser Leu Thr Glu Thr Lys Thr Thr Val Glu Leu Leu Pro Val Asn Gly
580 585 590
Glu Phe Ser Leu Asp Asp Leu Gln Pro Trp His Ser Phe Gly Ala Asp
595 600 605
Ser Val Pro Ala Asn Thr Glu Asn Glu Val Glu Pro Val Asp Ala Arg
610 615 620

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Pro Ala Ala Asp Arg Gly Leu Thr Thr Arg Pro Gly Ser Gly Leu Thr
625 630 635 640
Asn Ile Lys Thr Glu Glu Ile Ser Glu Val Lys Met Asp Ala Glu Phe
645 650 655
Arg His Asp Ser Gly Tyr Glu Val His His Gln Lys Leu Val Phe Phe
660 665 670
Ala Glu Asp Val Gly Ser Asn Lys Gly Ala Ile Ile Gly Leu Met Val
675 680 685
Gly Gly Val Val Ile Ala Thr Val Ile Val Ile Thr Leu Val Met Leu
690 695 700
Lys Lys Lys Gln Tyr Thr Ser Ile His His Gly Val Val Glu Val Asp
705 710 715 720
Ala Ala Val Thr Pro Glu Glu Arg His Leu Ser Lys Met Gln Gln Asn
725 730 735
Gly Tyr Glu Asn Pro Thr Tyr Lys Phe Phe Glu Gln Met Gln Asn Lys
740 745 750

Lys

<210> 62
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Peptide

<400> 62
Leu Glu Val Leu Phe Gln Gly Pro
1 5

<210> 63
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Peptide

<400> 63
Ser Glu Val Asn Leu Asp Ala Glu Phe Arg
1 5 10

<210> 64
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Peptide

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It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

<400> 64

Ser Glu Val Lys Met Asp Ala Glu Phe Arg
1 5 10

<210> 65

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Peptide

<400> 65

Arg Arg Gly Gly Val Val Ile Ala Thr Val Ile Val Gly Glu Arg
1 5 10 15

<210> 66

<211> 4

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Peptide

<400> 66

Asn Leu Asp Ala
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<210> 67

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Peptide

<400> 67

Glu Val Lys Met Asp Ala Glu Phe
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<210> 68

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Peptide

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Gly Arg Arg Gly Ser
1 5

<210> 69

<211> 6

<212> PRT

<213> Artificial Sequence

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It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

<220>
<223> Description of Artificial Sequence: Synthetic Peptide

<400> 69
Thr Gln His Gly Ile Arg
1 5

<210> 70
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Peptide

<400> 70
Glu Thr Asp Glu Glu Pro
1 5

<210> 71
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Peptide

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<210> 72
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Peptide

<400> 72
Asp Ala Glu Phe Arg
1 5

<210> 73
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Peptide

<400> 73
Ser Glu Val Asn Leu
1 5

<210> 74
<211> 4

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It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic Peptide

<220>
<221> misc_feature
<222> (1)
<223> Xaa = Lys or Asn

<220>
<221> misc_feature
<222> (2)
<223> Xaa = Met or Leu

<220>
<221> misc_feature
<222> (3)
<223> Xaa = Asp

<220>
<221> misc_feature
<222> (4)
<223> Xaa = Asp

<400> 74
Xaa Xaa Xaa Xaa
1

Signed and Sealed this

Eighteenth Day of September, 2007



JON W. DUDAS
Director of the United States Patent and Trademark Office